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INAME: RICHARD, Joseph E. **Text w/Tape:**

IPLACE: NSA, SAB2, Ft. Meade, MD; [redacted]

IVIEWER: FARLEY, Robert D.

[Tape 1, Side 1]

Farley: Today is 25 August, 1985. Our interviewee, Mr. Joseph E. Richard. As a member of the U.S. Army Signal Intelligence Service Unit, Mr. Richard joined the Central Bureau in Melbourne, Australia in the early days of World War II. He trained at Monmouth as a cryptanalyst and later, while in Central Bureau, broke the Japanese Army, high-level cipher system and also contributed to the solution of other Japanese systems. For this achievement, Mr. Richard was awarded the Legion of Merit. Following his discharge from the Army in 1946, he joined the Army Security Agency as a cryptanalyst and served with successor agencies in the same capacity. He was assigned to two overseas posts: NSAE Frankfurt, Germany and Melbourne, Australia. [redacted] The interview is taking place in [redacted] Oral History Interview Room, SABII, Fort Meade. Interviewer, Bob Farley. Mr. Richard desires that the classification of these four tapes be SECRET, Handle Via COMINT Channels Only. This is NSA oral history 14-85. (TR NOTE: Following the introduction to the interview, there is a short pause.) Just pick it up, start, as I say, and get as much as we can out of the way and go to lunch and then come back. What I want to do is ask you a lot of questions.

Richard: Oh, questions. Okay.

Farley: Questions. But let me pick it up...

Richard: I was wondering whether you wanted, sort of, experiences of (how) I got into the Army and how I got into...

Farley: Yeah, (B% hold it right there.) But we can talk at any level you want. If you want to talk about TOP SECRET material, we have what we call a dispensation paper that relieves you of your oath for the purpose of providing privileged information for the Oral History Program. So (xb) what you think should be on the record, you talk about it. So to set the background, pick it up in your late... pick up your life in the late teenage days. Your schooling, before you went into the military just to sort of set the stage.

Richard: Okay.

Farley: So, you're on.

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Richard: Let's see. Do you want my name?

Farley: Yeah, well, I'll get some background, Joe. But we can just say that this is an interview with Joseph E. Richard, 29 August '85. I always put that on the preliminary anyway.

Richard: So you can identify it, huh?

Farley: Yes, you have to. So if you would begin to talk about before you got into the military.

Richard: Yes, all right. Well, I went to (B% Sweatwater) Union High School in (B% Ocean City) California and after that I worked for a lumber company, (C% Vincent) Lumber Company in San Diego, and later, the 11th Naval District in San Diego and was there at the time I was drafted. I had a very low draft number. And too, I had gone to San Diego State College for a couple of years. And, anyway, I had a very low draft number. It was so low, that the Draft Board was still giving us breakfast at the... (2g). It cost them 25 cents each.

Farley: What year was this, Joe?

Richard: April 1931. And we went to Los Angeles where we were, of course, examined, physically and mentally, and given uniforms. Mine fit pretty well. And after about three days, they had a class for 60 people for Fort Monmouth that they had to fill. And they took mostly people connected with the (B% media) industry because, of course, the Signal Corps made training films.

Farley: Now you came in at a reception center in California?

Richard: Yes.

Farley: And they gave you uniforms and sent you to Fort Monmouth?

Richard: Yes, that's right. By train. And when we were ready to go on the train, we went by a man who gave us $10 each to pay our food all the way and then went around the corner and there was another man who took that $10 away. And I asked why and he said “well, I have to make sure that you get on that train with that $10. It's a two hour wait and some (1g) would be gambling and lose everything.” And actually the $10 was enough. It was two and half days to Fort Monmouth and I ended up with about 50 cents left.

Farley: You ate in the train? 120647

Richard: Yeah, we ate in the dining car. Good food. (xg). And I'm glad we did because I had a chance to see some (2g) and Nebraska and (2g) because they were part of the organizations that came down and gave donuts and coffee to the troops as they went through. This was at midnight or 2 AM but they were there. And I'm glad we went to Fort Monmouth because it let us see the East. And (1g) ran and paid $21 a month and about two dollars of that came out for laundry. I had some (B% lead) pay from the government coming from the (1g) so I had $150 to spend to see the East.

And so I went all of the way from Boston to Washington. In Washington, I remember, see on the weekends, there were communists parading around in front of the White House saying “keep out of the war” “don't fight this one.” And later on when I got duty in Washington, I noticed they were gone. And I asked one of the guards. I said, “What happened to those communists?” He said, “They left a day after Hitler invaded Russia.”

Farley: Oh, yeah.

Richard: And I went up to talk to the man because he had on a uniform, looked just like a U.S. uniform except he had no hat. A lot of people didn't wear hats then because the first hats we were issued were terrible looking things that looked like... I don't know, a brim around them. Certainly didn't look soldierly. And so I was talking and found out he was a (B% navy) man and he was making his (xg) his parade (2g) and must not stop. And he was a real (xg). But any way...

Farley: Back to Monmouth. Basic... you took basic training at Monmouth?

Richard: I took basic training at Monmouth and then (2g) the most interesting part of it to me was the (B% pistols they let us shoot there) which were (B% 45 caliber revolvers). And I remember reading in Zane Gray about some of his people had... used to have quick draws with them. But I think the Signal Corps had some idea about that we were less likely to lose them and to (2g) and make them out of (3g) or something like that.

Farley: Did you do any specialized training after your basic training?

Richard: Yes. I went to radio repair school at first. I tried out for radio intercept operator but didn't make it. And while in the repair school, I met a friend who was going to the crypt school and he told me it was a good deal. He said you go (B% for a year) and they promise you a commission and anyway you get interesting studies out of it like languages and everything. Like going to college. So I went to see the lieutenant in charge and he said, “Well, wait till you graduate and then come and see me.” And I did. And (xg) it was him because they had just released a lot of people, older men, that had been drafted and were over 27 or something...

Farley: They had put in their year (of) training?

Richard: No...

Farley: No?

Richard: It was a special release. (xg) They decided they didn't want those people. They didn't adopt to the army life or something. And they let them out after Monmouth. (B% They could stay in but...) So he said, “I don't want that to happen.” He said, “To make sure that you stay if for this, you have to enlist.” So I was drafted but at Monmouth I enlisted. (xg) and whatever. Then went to crypt school for two months.

Farley: Where was crypt school?

Richard: At Monmouth.

Farley: (B% Did you remember Seagate)?

Richard: There were other people that were there like (C% Klimness, and Bundee, and Fisher and all of those fellows). Of course, after (2g) things changed a bit and then we still got leave. And I think on Christmas, depending on (2g) Monmouth, well see, on Christmas, I remember going to Chicago to see an aunt and an uncle that were there... hitchhiking. It took 24 hours each way, hitchhiking. It got very cold there, winter in Fort Monmouth. And we were first in (2g) beds, which were warm and into some tents that had just a coal stove in the center and a wooden floor. And I was very glad when they said that they needed people down in Washington and about January 7th... or sometime in January, I was sent down to Washington to live.

Farley: What sort of training did you receive in the crypt school, Joe? Was it basic double transposition and... ?

Richard: (xg) double transposition. I think they were still on...

Farley: Substitution?

Richard: Substitution, yes. Alphabetical substitution

Farley: Yes. But you had some training, at the crypt school, before you went to...

Richard: Oh, yeah. For several months. Let's see; October, November, December, January.

Farley: Do you remember the officer in charge? Remember the name?

Richard: No, I've forgotten the name. (B% The navy was) overall in charge but we had a couple of lieutenants that were (xg). I've forgotten their names now. I can remember some of the students like (C% Ben Bear). I remember when he came in, I thought somebody was giving him answers because he was (B% doing) this so fast.

Farley: Did they promise you anything? That you'd be working in Washington D.C. or you'd come down to the (1b) building?

Richard: Well, they did promise... not exactly. They promised that at the start there would be IBM training, language, and crypt training.

Farley: I see.

Richard: And they might have promise some of the other fellows, this officership and all that but to me... I remember, it must have been December there, at least... because some of the people went into officer's training school right out of the school.

Farley: Oh, did they.

Richard: At Fort Monmouth, yeah.

Farley: Were you assigned to the 2nd (B% SAFE)?

Richard: Yes, it was called the 2nd Signal Service Company, Washington D.C. and it was in the Munitions Building. And we were given money to live out.

And by that time I was making about $21 a month. I had one stripe, I guess. Maybe two! I must have gotten the second one then... sometime, because I got the third... it was called (2g), which is two red stripes and just before I left Washington, (B% Gene) and I got the third... the sergeant, (C% T-4).

Farley: The unit at Fort Monmouth, do you remember the number or the name of that... was that also the 2nd Sig?

Richard: Well, I think the crypt school was.

Farley: Was it? Okay.

Richard: Yeah. Yeah, I think it was administered from Washington. Yes.

Farley: Okay.

Richard: We marched up to school and... actually, after the war started, there was this... they put a guard there at night. And one of the fellows in the course was going around with a 35 calibre automatic. By that time, (2g) we had a feeling because... I don't know, I guess we had instruction in firing a revolver, but I don't think they had given us instruction on firing the automatic. That's a different (B% training) and it's very easy to have accidents with the automatic.

Farley: Yep. So you left crypt school without graduating or did you graduate?

Richard: Oh, no. They just... well, this was supposed to be part of the training, they told us. They said we'll give you six weeks or so down in Washington as part of the training. But that was before the war started.

Farley: Oh, all right.

Richard: And that was a set of (1g) training. And so, I expected to go down there but the war had started and they just moved people and they just (2g) no matter what. Some people had been down and come back, I think.

Farley: Okay.

Richard: But, (B% many of my people) didn't, as far as I know.

Farley: Tell me about reporting into Washington, the Munitions Building.

Richard: Yeah? Well, there was this Colonel (C% Shoecraft's) office we reported to and there was a first sergeant there, kind of an unsympathetic one. And, they immediately sent me to... well, they gave me the money and so on to... I went... someone must have told me about that rooming house up at Dupont Circle. I could see about staying there. There was a room and board place there that I could afford (and) live in the basement. (C% Eric Brown) and I, for a while, had a room in the basement (xg) across the street. There were all kinds of... I guess, two thirds of the people who stayed with them (xg). They lived upstairs.

Farley: Yeah. Joe, how about an orientation. When you reported into (C% Shoecraft) did they give you give you any security briefing, make you sign an oath, did they tell you anything about what you were going to be doing?

Richard: Well, I don't know. I think the security briefing had been done at the school.

Farley: Was it?

Richard: Yeah. I don't recall any special security... anything. They were supposed to be very, very... not talked about. Things had became compartmented there and I'd... in the Munitions Building because... (B% I remember reading the paper), which I didn't know what it was, there was an iron gate and a special room. And they said... friends of mine, (xg) behind that gate. But I (xg) and none of them did. I didn't know what it was, what was behind that. I looked in the... first in the distribution of U.S. codes... was in an area there... Colonel (C% Chittendom) (xg) he was keeping track of the records up there. I was with the... in the next office (xg) systems, crypt systems. It was alphabetical crypts. We had to make those up. We had to (2g) box it to IBM and paste and (xg), and pasted Signal Corps flags on them. (xg) there was a glue (B% pot) with the... at the (B% heating) end of it. (B% red glue) had the (1g) glue. And they kept telling us (3g) didn't smell so much (xg) because (xg) the office, a civilian. And she came and objected to the smell. And so, I noticed that... I didn't care much that... (xg) by working there and I was just there long enough to begin to know where things were when they needed people to (B% grab) the incoming traffic on the evening shift. And actually, worked in Colonel Shoecraft's office at the desk in his office. He had a couple of (B% lieutenant's) desks there too. And we took all the incoming traffic (xg) just about.

Farley: What kind of traffic was it Joe?

Richard: It was (B% four) digit.

Farley: Was it Japanese?

Richard: Japanese four digit. Most of it came from Two Rocks California. And a little bit of... I remember (xg) a few messages from Corregidor came in. They... let's see... most of those... I guess a lot of them came in on the teletype and it was pasted... pasted strips on the piece of paper. And there wasn't that much. There were about four of... at least four of us that did the logging. Maybe five. And we used to get (3g) two or three hours afterwards that we (xg), five to twelve or something like that. And Steve (C% Wilson) and myself used to work on trying to... Steve was trying to recover the nets. He later became a traffic... later wrote a book on traffic analysis. But he was learning then. And I wrote down the (B% feeding) instructions. There were... a three-digit name and then a two-digit (B% speller) and the speller used to change every month. That is... it was a... the two-digits were on the outside of the square. And that as bad as that... (B% I didn't know, I did the English which would have been simple for a good linguist) inside of that square in no time. I think now, (B% they weren't aware) it would have been nothing. But I didn't... I had gone to somebody just about the time I left in June, to see... to get samples of the Japanese alphabet. And actually, I think I may have gotten 40 or 50

characters because (xg) some symbols and stuff. And they were (xg), we found out later, (B% bastings) in Japanese English. Like there would be (C% rah ah bu ruhu) for a ball and show up (xg) and things like that. There were some of them that were fairly long and so there was really no trouble to recover the changes in the outside digits of the square from the (B% land) ones. Because the (B% land) one looks the same and you could just see the characters. It was interesting because later on a sergeant showed up there that was in... that had broken the Philippines in '38 and they found some documents that they had sent in. There was some... in 1938, the English (B% intercepted the Jap Army), '38 or '39 maybe. (xg). Then the Philippines intercept outfit had been changed to diplomatic and the didn't intercept any army stuff for a year, 18 months, all diplomatic. So, they lost any continuity they had, no traffic. And previous to that, the same addresses... (1g) system had been used and they had recovered the outsides too but not the inside. I found out that they... in 1932, using the same outsides but in reverse. There was... December was the third, then January/February was November and so on. That had been recovered in 1938 or so. But just about the... well, they had... I liked Washington (xg) and there were a lot of things to do about Washington. One of the highlights was... that is, my... when the President invited all the... the wife... he and his wife invited all the soldiers up to the White House lawn and gave them ice cream and cake. There were about 500 soldiers there and only (2g) officer could... had to take a squad of soldiers up. And Mrs. Roosevelt and the little (B% Hopkins) girl came out and talked to everybody. And they had the pavilions there with these butlers had been given... big plate of ice cream and a big slab of cake. And (B% while we were lined up there) Roosevelt did come out and gave us a little talk. (xg) Washington. And he said the work we were doing really was important and we should (xg). And Mrs. Roosevelt mostly talked about her boys in the service... her sons in the service. I know that because the guy that was with me, the man was going to be a minister, (C% Lee Parker) he talked to her. He was... that's what she talked to him about, anyway. It was a beautiful Spring day May sometime. Of course, we were working evenings that's the reason we got to go, see.

Farley: Joe, do you remember the names of some of the troops with you at the Munitions Building? Did you know Sinkov there or Kullback, Girhard?

Richard: No, Sinkov... no, they were all... they sent Abe to Australia. But I didn't... in fact, I was working evenings most of the time, see, and as I say, I didn't meet... I remember Shoecraft and I think there was a Lieutenant (B% Pope) and he was organizing... the guys in his office... organizing intercept stations in Alaska. And I think one of them took a station up there finally. They were getting all the supply things together. Trying to get an intercept station going up there. And, of course, in the... other end of it, on the distribution end, a Major (B% Cook), he was the top man there. The men that were working with me in there were... (B% Steven Smith). As I said, he was head of the TA department later. And a guy named Curtis and (C%

Henke). And of course (2g) was down there then, I believe. There was a major... a Colonel (C% McGregor) who was in charge of (2g) some chemistry and (1g) cryptography. Then some place... of course, for linguists like... let me see. There was a lady there who's brother was afterwards the ambassador to Japan.

Farley: (C% Warshaw)?

Richard: Yeah. Her I met and... but I didn't know... not too many... that I later knew because I was working evenings and didn't see them. But I... about that time... June? Or May, late May, I guess. About Arlington Hall... there were rumors all the time that we were going to move to Arlington Hall. Well, I didn't really care too much for going back into the (B% crypts). See, and our First Sergeant didn't seem to like me for some reason. At least he didn't like... he wasn't from the crypt school. He'd been a clerk someplace here in Washington and he thought the crypt school guys were... well, I guess he got on the outs with them. Anyway, I thought... I'd just heard that... somebody told me that (xg) to England. I'd like to go to England. I've seen the East Coast now. And so I went to see a Major (C% Swenson). He seemed to be in charge of shipping overseas. And after I talked to him for a while he said, "You better stay here. This place is going to grow even more." And he said there would be a lot of good places here if you stay. And I said, "No, I want to go." And he said, "Well, I can't send you to England but I can send you to Australia as the next best." So, I said okay. And there was a group being made up under... charge of Lieutenant (C% Ray) to go to Australia.

Farley: (B% Chet Ray)?

Richard: Yes. So, about 20 June or so we started. And this time we crossed the States, I think we had tickets for New York. We didn't have money. And we stayed in the terminal. Of course, there were only eight of us or so. Seven or eight at the most. And of all things they gave us loaded gun to carry across the States. And they (xg) us a loaded 45 caliber across.

Farley: Were you taking any classified material?

Richard: Not that I know of. I'm sure... we never had much to take.

Farley: Joe, just let me bounce back to...

Richard: Well, we might have had something. I don't know.

Farley: Yeah. The Munitions Building: the success in breaking any of the Japanese systems. Were you reading any of the army traffic at the Munitions Building?

Richard: (xg) that stayed there. We had very little (B% transmitted) to work with. Because (xg) the first six groups and the last six and (xg) thinking about each message. (xg) there had to be a large volume. We would have had to have had thousands of messages and we only had scores. And so there was... there was nothing known about the nets. Now (B% Steve) was working on those nets and the only place that we were sure of was

Tokyo. And the only reason that they were sure of that... the (1g) DF. Nobody was in Alaska to DF (xg) anything.

Farley: This was early in the game?

Richard: Yeah. So, we knew it was Tokyo because so many messages were sent into there and they (xg) and that was the only reason... I mean it was such a big... had so many circuits going into it. All we had was a three-digit number for Tokyo, see. And they were changed to four-digit by the time I left. But they had diagrams of the same period that I spoke of and they were in China. And actually, I think the place they were trying to call Shanghai was really Singapore, see, because they had taken (2g) up there and (xg) the nets (xg) no use at all. So there was (4g) knew nothing about Japanese traffic. All you knew... these different... they did discriminant on it. They were four digit... the higher level stuff (xg). And you didn't know the identity of which system was serving who. In other words, 5678, I guess in those days, was the main army system, down at division. But we didn't know that (2g) from 3366, which was the air force system. They didn't have the 2468 in those days so that there was none of that. So, it was pretty (2g) systems.

Farley: What was the water transport system? 2468?

Richard: Yes. The (1g) were identified. The nets were (B% unidentified), all we... (xg) actually, all they were hearing was (B% umbra), I think. I don't know if they were even getting very much of the 36366, the navy... I mean the air force net. There was nothing being read because there was nothing to work with.

Farley: Okay, good.

Richard: No TA information to work with. That had to be recovered. And it just shows... of course, the army just wasn't ready. They didn't have the intercept stations. And it took a real long time, beginning of 1943, before they had enough intercept stations to get the volume they needed to begin the start on reading the codes. So, 1942 was just... well, I think with Washington [B% and they didn't know it) may have gotten some British stuff that was taken in Hong Kong and Singapore before the war and the training linguists and cryptanalysts, which began in 1942, using this... just taking this (B% old) traffic and reading it so they would know how the Japanese phrased and what their code books were like in the (B% meanings), but they weren't the same. So that it really wasn't... it was better than nothing, certainly got the linguist trained. And there was nothing... the only recoveries that I could tell you (xg). As I said, I recovered the outside (xg) on the rating.

Farley: Okay.

Richard: And should have gone further but I actually left at about that time. And about the same time, they changed their system from a three-digit system to a four-digit, because they had so many more places that they needed

the added numbers. The four-digit system was... they assigned a lot of four-digit numbers to places and they had a four-digit speller, which wasn't honestly a square. It was just a code. They took the last 300... I think four-digit numbers or something. I think they took number... four-digit numbers and just had the alphabet (2g) with them. Actually, I think when we found it, the original one was almost alphabetical and then later on we changed those numbers now and then. That was later. Actually, that was discovered courtesy of the Navy. Not (xg) tried to keep us.

Farley: Joe, let us get back into sequence. I don't want... you jumped too far ahead. It becomes confusing. Let's go back and pick up the transport train going across to Camp (B% Stoneman). Who else... what other people were with you besides (B% Wray)?

Richard: There was Hank (C% Dalberg, Bushneck, John Bartlet, Johnny Copolis, I think Quince) and... that's all I can remember right now.

Farley: How about the fellow who was in Australia, who is living there now? From (C% Redbank) New Jersey?

Richard: Oh no, (B% Les) was over already. He was one of the early ones. He was over there before I was.

Farley: How many went over first? Would you know? In retrospect, thinking back. There was Sinkov, Girhard, Les (C% Truax).

Richard: I the beginning there must have been 15 or 20.

Farley: Were there?

Richard: Well, (xg) over. Like Clark came over on the plane and (xg) around.

Farley: How about Otto Mahrt and Clarence Yamagata?

Richard: Well, they could have come from the Philippines.

Farley: All right.

Richard: I was surprised to see any Japanese in the place. Well, I think maybe he was working someplace else after a while. Perhaps translating documents or something like that.

Farley: Was Erskine there?

Richard: No. No, I don't remember him at that time. There was a Lieutenant (C% Holmes), and there was Girhard and Clark and Sinkov as officers. And Wray, of course, when he got over there. There was some of the fellows like (C% Tipperon, and Dallas, and Himler) I think, and Young and Trist Johnson. Yeah, I'd forgotten when Trist came over. I don' think he came over with us. He must have been there already.

Farley: Okay, that's good then. So your group, you went to Stoneman and then...

Richard: Yeah, we went and got on a Dutch ship, the (C% Fontaine) to go over to Australia and (B% Chester) already told the captain or whoever was assigning places that we were all noncoms [non-commissioned officers].

And therefore, they put us in the back of the ship where there was second-class. We weren't in the hold.

Farley: Geez.

Richard: This had been a passenger-freight ship. The officer's quarters, the firs-class passenger quarters were sumptuous. I once walked through the dining room and the table was set for dinner (with) silver and crystal. Because they had all these Indonesians as cabin boys, see. Waiters and so on. So that their things were very nice. Of course, second-class wasn't bad. We had bunks and so on. They were in the stern of the ship which meant they went up and down a lot.

Farley: Yeah.

Richard: Well the (B% lead) ship, a beautiful ship and the captain had been in the navy yard there and (2g) had taken every gun they'd let him have because he had two 2-inch anti-aircraft forward, and he had 37mm on each end of the bridge. And then he had a four-inch one on the stern. We did fire the anti-aircraft gun a couple of times for practice. And then one time they set off the one in the stern but they didn't do that again because it sort of moved the ship a couple feet.

Farley: A four-incher will do that, right?

Richard: Yeah, that was... it wasn't anti-aircraft it was more for... the 37mm, they used to use a lot of ammunition (xg). They just popped off. They had tracers in them. I'd been in the National Guards. I was assigned... we... you had duties that you... you either had to be... like, one of the guys was in charge of getting crews for the KP and there was guard duty. We were all noncoms, you see, so we had to work. But they needed people for the anti-aircraft crews and I'd had anti-aircraft experience in the Guards so I was assigned to those crews (2g). And (xg) probably wouldn't be much good in case we (3g) because the only equipment we had on there were manual sights and to hit aircraft you need computer control and range equipment. I knew that because in the Guards we had it. And so I... the fellow in charge and he was... had a (2g) experience. We asked him (xg), how long would it take that (B% charge) to get there and he said it'd take a six-second fuse or a 10-second fuse. They came already cut in a set in the ammunition box. So, whereas in the (xg) you should have a computer telling you how to set it within seconds of a shooting. (TR NOTE: There was about a three minute gap in the conversation at this point).

Richard: (xg) and he was also (in) the Australian air force. Yeah, that's right. I know he was because they put a unit in Moresby as soon as they could to help give warning of flights attacking Moresby. Because radar couldn't work very well. The mountains all around Moresby kept them from hearing the planes and seeing the planes before they were very close.

Farley: Joe, was the 125th, the 126th, were there any RI companies in existence that early?

Richard: The 126th, as I remember, was, I think, was (B% Bond's). He was building that up.

Farley: Okay. It was one of the first RI units in the theater?

Richard: Yeah. And I think he did start with some of his people... (TR NOTE: Next 25 minutes on the tape are blank)

[End of Tape 1, Side 1]

[Tape 1, Side 2 blank?]

[Tape 2, Side 1?]

Farley: Joe, were you aware of any other SIS units... the one in Hawaii? I don't know whether there was one in the (C% CGI) yet? Or did that come later? I don't know. Were you aware of any other signal unit other than those in Melbourne?

Richard: No, because as far as I knew there was just Washington, Alaska (xg) up there. Well, I guess they had an intercept outfit in Hawaii but as a processing center... a reading center, no. I wasn't aware then, although later, after you (xg)...

Farley: How about Corregidor? Were you aware of (1g) outfit there?

Richard: Well, as I said, when I was handling the traffic in Washington in the Spring of 1932, we did get a few messages in from Corregidor, only a very few.

Farley: So you knew, so you knew about that outfit then?

Richard: Yeah, I knew that there (B% somebody was listening) but I didn't know who.

Farley: Let's talk about the talent of the Aussies and the Americans. Your unit was made up of various specialties. What were they?

Richard: Well, everybody was in... except for photography and chemistry, which was (C% Holmes and Prince). He was a photographer. We were all crypt trained from Fort Monmouth. Everyone had been spent (B% seven) months at Fort Monmouth crypt school. So there was (xg) like those who had taken their crypt training as reserve officers like Girhard and... but Clark and Sinkov, of course trained (xg) Washington (xg) before the war. Clark had been in on the Purple (xg) at Fort Monmouth.

Farley: Do you remember any linguists at all?

Richard: Gee, I can't remember when all those came over. I don't think there were many of them. I don't remember them there. I don't know. I don't know. I don't remember a linguists.

Farley: Did the Aussies have linguists? They must of (xg) traffic.

Richard: I think so. But I don't know. All I remember is that they were (2g) TA people. And they had (B% crypts). They used to give some of the new people (xg) pad and paper and just (xg) crypt things.

Farley: You mentioned that there were no machines at (xb), no IBM equipment?

Did the Aussies have anything, any machines?

Richard: Well, I don't know what their businesses had. I'm sure their businesses must have had some (2g) equipment and why we didn't get some of it I don't know. But the machines we got came from Washington.

Farley: And that came in (C% Chatham)? Or did you have (xg)?

Richard: Yeah, we were in Chatham and they came into Sydney and he couldn't find it for a month... or a week.

Farley: But you didn't have any IBM equipment in Melbourne?

Richard: No, we didn't.

Farley: I see.

Richard: Nothing but a pen and paint set.

Farley: That's pretty sad, pretty sad.

Richard: Yeah, and we didn't have enough to work with and we couldn't accomplish anything.

Farley: Did you produce any product or any intelligence in Melbourne over your six months stint? Were you producing material that (C% Athum) and his troops could use or Willoughby or?

Richard: No, I didn't (2g) end product because we weren't producing anything from (2g) but, card... this is SRI cards, that is, (2g) TA people.

Farley: Yeah.

Richard: They were (xg) intelligence (xg) and they could release end product up in TA and I think they really started some things that were (xg) into, but I've forgotten... I don't know when the publications started. But I know with Athum and (xg) and these people were putting out daily summaries.

Farley: Okay, that's what I was wondering. So there were translations, or daily summaries, or reports, or (B% what type) product it was?

Richard: I think (xg) be a lot of things in from the Navy and early on it looked like they were getting a lot from the Navy who was much further along than we were.

Farley: Was there a better relationship Australian Army and the Australian Navy and between the American Army and the American Navy intelligence units?

Richard: All I know is that the, I think the Aussies were probably... got along pretty well with each other. I know that later on we had an Australian Navy captain with us. I rather think that Sinkov must of gotten... somebody at the top must have been acquainted with the Navy and what was going on there. As I say, I didn't know anything about it. I didn't know that it existed then. And nobody... there was never any disparaging remarks about the Navy where I worked, ever. I didn't think they (xg) except to ask MacArthur's that they would like to (xg) him but the Navy wasn't about to

let him have anything that belonged to the Navy. So... between Akin and Willoughby and the... (xg). The Australian Navy, yeah, in fact, I think we use to get traffic that had been intercepted by the Australian naval girls. They had an intercept outfit someplace near Melbourne. I think we used to get traffic from them. (xg) of course or Navy in Washington traffic there.

Farley: Joe, what did you mean (C% built) common in here?

Richard: Well, (xg) something to do with this navy outfit down there. The only thing that I know and of course... later on, (xg) with us (xg) and he was in Corregidor and he was in Melbourne. And as I said, (xg) you know in '62 and '63 (xg). Then, I talked with the CB outfit (xg) who had been in the navy, and the IBM man... one of the IBM fellows down there had been a navy IBM man.

Farley: Was it an intercept or a communication's station for the Navy (xg)?

Richard: I don't know. They always called it something else. I always did. I've forgotten the name of it. (xg). They did intercept (xg). Whether it was actually (xg).

Farley: Joe, (xg) was he Colonel Akin then or was he General Akin in Melbourne?

Richard: He was a general.

Farley: Brigadier then?

Richard: Of course, I wasn't aware that he was at the top then. I just knew later that he was the man in charge. I thought, I just actually thought that Colonel Sinkov, I think he was Major Sinkov then, was in charge then. I didn't think about who was there (xg) was the Australian Army man and, of course, he was (xg). I know that we were under MacArthur's headquarters and that we got paid by his people.

Farley: Would you know the name of (C% Nick Stanford). His initials are AW. Would you have ever have known his first name? I've looked through everything. Somebody wanted to find out what his real name was. All I remember is Nick. He was A. W. Standford. His signature was always AW.

Richard: You'll have to ask (2g).

Farley: I already did.

Richard: It seems to me like he... that he and Sanford used to be quite chummy with each other. At the time he was a captain. I think they found rooms in an Australian house nearby that was... I think both of them were there. And this other fellow was just a lieutenant colonel... a lieutenant colonel.

Farley: Joe, tell us about an average day in Melbourne. An average day where you would come on... on 7 o'clock or whatever and tell us what you did.

Richard: Well, course we (xg) so we'd talk to Tom. (xg) to (C% TEAC to TEAC) and (xg). We'd sit down with this traffic and somebody... one would read the (1g) and the positions in the message. Like 10th group is (C% 1010) and etc. Although (xg) had a line in the book. Like a copy book you'd use in

school. That line would be 019 for instance, and you'd have 019 and then the message number (xg) and the position in the message so that later on you could see all the messages that had 019 in it then you'd know, see, know (xg) you'd find out what other groups had in common and if they would match up in position. So as I said, I think they finally (xg) two groups or something like that. And they did this all day long, the subtracting (xg).

Farley: This was arithmetic, non-adding arithmetic?

Richard: No, we needed (xg) subtracting positions.

Farley: Oh, I see.

Richard: As we went along, I think. I think there was... I think I don't remember exactly how to do it. It was quite ingenious. It didn't work out if you made a mistake. (xg) subtraction all day long and (xg) without mistakes. And I thought it was hopeless from the start. And (xg) wasted (xg). I think that all the people on the top like Sinkov (xg) and organizing the unit. And the people coming over and getting supplies like coming to get some IBM equipment and stuff like that. He had... and later on, of course, (xg) from the Philippines (xg) Colonel Clark was assigned to... be in charge of creating secure communications to them. (xg) parking so they could park at the head of (xg). And for some months he was on that. (xg). He came back sometime in early '42 I think.

Farley: Did he get something into them?

Richard: Oh yeah. They really got going on the (xg). I think (xg) the M-209. (xg) But they used to use... to get (B% ground) they'd use things like (C% crystal) identifying maybe what to do like (xg) or something like that. And of course, then Americans (xg) and tell them to get a radio set up and (xg) and they did it too. As I say, I was sorry to leave Melbourne but... along about September.

Farley: Before you (B% ended your tour)?

Richard: Yeah.

Farley: What sort of security did you have at the house? Did you have a guard at the door, inspecting badges, inspecting photographs, inspecting passes in Melbourne?

Richard: We had a guard. But I think (xg) There wasn't that many people. I don't remember having any kind of a badge. I don't remember that they could have had one. Might have. I don't remember. I know the Australians guarded the place.

Farley: Was there any restrictions, for instance, you wondering around and looking over the shoulder of an Aussie cryptanalyst? Any division of labor that some people did something that... and you did something that nobody would know what the other person was doing?

Richard: I think (xg) and they wanted to keep you busy at what you were doing. (xg) could occupy yourself day and night (xg) if you could stand it. I mean, it

was just like (xg). As I said, the only time that I really got... some of our people, I think, maybe (xg) to work with the Australians but I didn't (xg). And I don't know now why I didn't. (xg) requested it. Although, I think they did use anybody they could get their hands on to do their... I think there was that much work. There seemed to be stacks of messages.

Farley: Joe, were there any British people then, New Zealand people, (1g) people?

Richard: Not at that time.

Farley: Okay.

Richard: Well, I don't know when the (xg) came but there were some British (xg) and he had worked (xg). I think at Singapore or Hong Kong or something like that. (xg). But you couldn't tell they were Aussies because they (xg) or something (xg).

Farley: That was what I was going to ask about Singapore. Were some of the evacuees from Singapore (xg) at Melbourne?

Richard: (xg) but they had some (xg) come from Singapore because I know they said that (xg) messages (xg) code that they had read at that time (xg), in fact. But I don't... there might have been more people that came from Singapore but I don't... or Hong Kong really. But I don't remember. There must have been... maybe a linguist (xg). I don't remember being one on the (xg) of it. I don't know what he did exactly later on. (xg).

Farley: Joe, did you get any support from Arlington Hall at all? Was there an exchange of technical data?

Richard: Yeah, I think that (xg). No, hadn't happened yet. They had nothing to send. (xg). (TR NOTE: The next three minutes of tape/digitization are unreadable and hence not transcribed. The interview continues with Mr. Richard talking). The only bad thing I know that happened to him was this... him (1g) being too fast and (C% Dees) was a lawyer. And all he was was going back to moving in an emergency fashion yet. So that caused some bad feeling there, I think. I Well, I'm sure Don was humiliated. Not only that but because he knew what good they could do. The only... there was some... .his intercept people did... there was a Japanese long-range plane that was bombing up around Townsville regularly. They did manage to intercept the messages from that and one day they (1g) people in and they got that man. So that was about the only success that I know of at that time. But other than that we just worked on this (2g)there. And one day they come and told us we were going to Brisbane. And... Lieutenant Holmes came to me and he said that "I understand that you know how to drive a truck?" He said that "the photographic equipment we don't want to put it on the train. I have a quartermaster truck that I can drive up there and leave. And I need a driver. (B% And so the guy...) he can drive too but we want an extra." He and (C% Prince) and an Australian... master sergeant I guess he was or warrant officer, (B% Stevens) were his

photographer assistants. And I loaded this truck up with the photographic equipment. They had some already. I guess they could get that in Australia. And personal things. And drove it to... he had a map of all the gasoline dumps the Army had on the way. And also he had a warrant that would allow him to buy gas at a service station. He couldn't do this otherwise without coupons. It was all rations. Doctors and things like that could get some gas. Like this doctor we (xg). Although he was saving because when we drove him to town from his place we did it in a horse and wagon. That was a big thrill. And the... he said... all of a sudden we went inland. He said, "You are not to go on a coast road." You could go inland on some secondary roads inside. They were good roads, paved. And so we went up by (C% Gungadai [Gundagai], Dubo [Dubbo], and Gunadelram).

Farley: Had MacArthur's headquarter moved to Brisbane by this time?

Richard: Well, they were coincidental.

Farley: Okay.

Richard: We went. They went. Our people got on the train and went. And the two of them and the four of us went up in the truck. We had the best... the boys on the train, I don't know if they had any sleepage or not.

Farley: How long did it take you to drive? A couple of days?

Richard: Oh, yeah. There was about four days at least. The truck didn't go that fast. And you didn't want to go that fast. You might wreck it or something. We stopped, oh about four nights at least, in different places. And I don't know who paid for that. I guess I didn't pay for the hotel. Maybe Holmes made some kind of arrangement with the proprietors. We disappointed a lot of people on the way up because we'd come into a small town, going to stay the night, and they always wanted to know if we were the advance truck on the convoy. Now if it was a convoy, they would have opened the music... no, the movie theater and had a dance.

Farley: Oh yeah?

Richard: If there was a convoy coming. The few of us. Of course, we were only one truck so they were disappointed when they found that was just... there were always supplies being (B% found) in Adelaide and coming up overland and I suppose Melbourne too. This road was paved and a good one. Was a little, I don't know, some hills up near Brisbane. One place we stayed there was a girl, the daughter of the proprietor, and she had a baby kangaroo that she lived in a little burlap bag on the fence. Hopped in for us and everything. So, we got well acquainted with the Australians like that. We also saw, they didn't have any charcoal to keep their going out there bit they had a canvas bag on a frame on top of the car. The canvas was painted with something... or saturated with something that would keep the gas in. And they had... this bag would be about half full, billowing on top of the car. It was some sort of (B% stove) gas, I guess, that was... you could

run... of course you could run a car on the... whatever it is that stove gas is. And most of the country cars would have that because of the gas shortages. The Army wasn't short on gas. All those places we pulled into... the Aussie dumps with lots of gas in cans and so on.

Farley: Joe, was the headquarters in Brisbane ready for you? Did you go up to (C% Youronga) Park where their barracks or village were?

Richard: Well, they were just using the race courses as... and we were sent to (1g) them race course and we slept on cots on the grandstand that night. And then they said they would give us so much money for meals and that would be enough, a week, to get rooms if we wanted. I think it was Trist Johnson and I went over to a rooming house just opposite (C% Tungen). The lady had a house with a veranda and she had rooms and cots all the way around the veranda, as well as in the bedrooms in the house. Also, she served breakfast. So, we went there the next day and so we didn't spend more than one or two nights at Tungen. It seemed to me that officers and everyone else were there, at least temporarily, until they got their billets - houses or something that had been taken over by the officers. But they did have this big... great big residence that had been an apartment or (2g) on Henry Street where we worked, we went up to work (1g) immediately. And started in again on the (C% Handiforce). And that was, I guess, Trist and I stayed in that house quite a while, as I remember it.

Farley: Joe, Ascot Park was not available yet?

Richard: Well, I think possibly it was there but... and had been taken over I'm sure. There were no (B% aces) in it I'm sure. But I think they were using it more for the people that were coming in by ship. I only remember it being used as a (B% record) depot for people... if you got in there you might not get out. See? You might be (B% fighting with anybody) and you'd have trouble getting our people out of there. And so that was why (C% Demon) was also available. But I don't know what it was used for much later in the peace while Ascot Park place for it.

Farley: Were there CB people in Brisbane by the time you arrived or were you the first contingent?

Richard: Well, I think they did come up by the train while we were there.

Farley: Okay.

Richard: All arrived the same day.

Farley: There were no people who came from Arlington Hall who were already in Brisbane by the time you were there.

Richard: Oh, no. They came later. And they would come to this Ascot Park and we would have to try to find out they were there. Usually, they would get leave and somebody would see them in town and Sinkov would make a move to spring them from there. Because the depot man was always wanting to use them in assignments to work there. Some of them could type or do

other work that was useful to him.

Farley: You went right to Henry Street then?

Richard: To work, yes.

Farley: Right.

Richard: That's right. Immediately.

Farley: Now this is in September, October?

Richard: September, September of 1942.

Farley: Of '42. So the weather was fairly decent so you sleep outside. It was a different from the... .

Richard: It was Spring. It had just begun to warm up. We had one day at the beach before we left. (TR NOTE: Mr. Farley changes the tape at this point and the conversation continues).

[End of Tape 2, Side 1?]

[Tape 2, Side 2?]

Farley: You were in Brisbane and the weather was fairly decent?

Richard: Oh, yeah. No trouble sleeping out there on those beaches on the veranda. So, we had no trouble with the... it was only when Winter came next that we found it was pretty chilly working with the... and they closed in the verandas at Henry Street and so on

Farley: I remember that. We're talking about people assigned and I neglected to ask whether there were any Canadians?

Richard: Not yet.

Farley: Not yet! Was there any organization, was the unit, that is CB organized in any matter, translators, TA, administrative?

Richard: There was a general separation of the crypt to the Australians. With us, we had Clark in charge of... and T/A to the Australians and crypt to U.S. because Doctor Sinkov and Clark with so much experience in that. And that was only (2g) we had some (B% Aussie) people were crypt trained that he brought. None of us... since they were there were TA people because there were no T/A left. Nobody in... whatever people was there like (B% Don) and so on they had been intercept operators that knew how to do T/A really and, of course, the Australians and so that was the normal, simple division at the time. And, of course, the T/A was producing, beginning to produce, sometime in September, Washington sent through the solution to this really... instructions that occurred on every message, the from and the to, place names. And so after that the Australians were very busy recovering that and I know that... I'm sure they had a linguist by that time working with them. And a (1g) linguist. And the way that was solved in Washington was really via the Navy. We had an agreement with the Navy in Washington that any Army messages on Navy circuits that

they picked up they would turn over to us. When an Army message went on a Navy circuit, these reading instructions would change Navy reading instruction systems and even the address at that time, which was the unit address, was very valuable, would change too, to Navy systems. The Navy systems, their reading instructions were no more secure than ours but they'd solve them. But the address system was also solvable and so these... what happened when Navy messages came into the Navy people, they... before they were sorted out, they could get the Army... this was all written in, that could be read, on these reading instructions. Well, then the messages were to be picked out to be sent over to us. They were instructed to erase that. And, naturally, you couldn't do a very good job over there, you see. So, when it came to Steve Wolf, he noticed it when he was sorting his messages, that he was getting the same message over an Army circuit than over a Navy circuit. And these Navy people had obviously written in the values below their routing system. So, he could see them and figure in some of them (xg) and of course he immediately went over to the Navy and somebody on a higher level got them to agree to give Steve the actual recoveries, see, so that he could... after that they sent them to him all written out. By comparing them with his, they soon got all the values out for the reading and also began to get some unit designations like... in the addresses... so like to the 3rd division or to the 1st Army headquarters. Or... and from... I don't know whether the FROM was there or not but the TO was there. If there was a (1g) message, (xg) people. That was the first real intelligence that they begun to get. That would help them start identifying the stations, start the TA so that... knowing the net and the stations and the units. They could see that messages were going to this unit, or something like that, or the unit moved or things like that. And I know that Clark and his people were working very hard on the reading instructions. Of course, you had (B% words that were) spelled out, like (C% pavel), but then the four-digit numbers that were assigned to places, you kept hoping that you'd get one on the Navy (circuit) sent addressed backwards to one of those. But they did manage to identify a lot of them. So then, they began to get the nets and they'd know this was from Tokyo, this was from Singapore, this was from (C% Lapaul). They started to get their nets together.

Farley: Yeah. Were these called the WE WE messages? Remember those?

Richard: You mean the Navy? The Navy... ?

Farley: Messages being passed on the Navy circuits or vice versa. W-E W-E. Remember those indicators at all?

Richard: No. I guess I never... actually we didn't get so many of those, maybe, in Australia. I don't remember... the name sounds familiar. I remember that WE WE stuff but that's a navy term.

Farley: Yeah, okay. Okay, it doesn't matter. When did 2468 come in?

Richard: Well, ah...

Farley: Am I jumping the gun now?

Richard: No. This was about all that happened in the Fall and Winter was getting out the nets and identifying the reading instructions. Getting a few units out. And meanwhile, we went ahead with this (B% HANDY FORCE) and it was completed. And as I say, after it was all correlated together, why, it came out (1G). But that took into the Spring of 1943. At the same time we started to get the other IBM equipment. It had been shipped before but it was just sent... offloaded at Sydney and there was no notification that it was off-loaded so Dr. Sinkov sent Major Clark to Sydney to find it. I don't know how... well, he said he just walked around and finally saw some boxes at the end of the pier that looked like big boxes that might be it and he went back there and found out that was the IBM machine. It was just off-loaded on the end of the pier and had been sitting in there in the salt air. So, he drove back. But the first thing that had to be done, all the machines had to be taken apart and all the wheels had to be sanded or tightened up so they would work reliably.

Farley: They were corroded obviously.

Richard: And Zack (B% Halperin) and (B% Swanson) and I think (C% Fasia) was there. Swanson and Fasia were maintenance men and they knew about maintaining it so that they were... could put it back together okay. And so that took a little while. I think by about March, they got it to work. It was in Henry Street, in the garage. And the garage was lined with insulation and arranged just for those machines to be used... able to work in the cool environment there. But what happened about early... sometime in January was that... well, August and December, we had a bad accident there in which I guess they decided that we should be able to handle our guns since we had... and the bad thing was there was some pistol instruction given in the building, in the room that was just a kind of a balcony, just an open door where people were working. And by accident a gun went off as they were finishing the instruction... just let the gun down and (2g). The Army teaches you to do that and it went off and it shot one man in the abdomen. John (C% Bartlet) his name was and it took us so long getting him to a hospital. We called up... Ascot Park, I know, they had an ambulance and people like that it was so long in coming. Knowing now what I know, I'm sure that it was the shock was too long. And of course, there were no things like penicillin or things like that to help. He was taken to Brisbane General but he didn't make it. In other words, he died later, that evening. And 45 caliber in your guts, I don't know.

Farley: I'm surprised that they trained with live ammunition.

Richard: I was too. The thing was that none of us were used to arms. Ammunition and things like that should have been done out on a range. That's why it should always be done on a range. And, well... they never did anything like that again. I guess the Aussie used to do a lot of training, but I don't remember them with ammunition. They had more bayonet unarmed combat and stuff like that. So that kind of affected me and several others.

We always thought we were a little to blame. We didn't get him there soon... to the hospital soon enough. We waited for the ambulance. We shouldn't have waited for the ambulance. Truax said “put him in the truck and take him up.” If we'd done that, he might have had a chance. I don't know. But anyway, I was so bored by this HANDY FORCE, which I had to do all day long, that I wanted to get back to handling some messages that had some... well, the main... all the (2g) mainline messages looked interesting because they had repeated groups in them. Obviously (they) had indicators. And the other stuff... we found out later when we read some messages that almost all the three-digit stuff was one-time pad, just was hopeless. You'd could never read it. If you ever captured the pad, the other guys couldn't use it. And so that was a lost cause. Anyway, (xg) very interesting. I noticed one day that the Australians, after they'd done their TA, all they did was (C% clip) all the messages higgledy-piggledy, not sorted by system at all, in a folder for the day. I asked Clark about it and he said, “Well, we don't use it anymore. We just keep it for reference after we do that.” And then I went to Doctor Sinkov and said, “I'd like to get at that and sort it by system.” And I went to Doctor Sinkov and he said, “See if you can arrange it with Major Webb.” Well, I guess he was a major. Maybe he was a captain then. So I went to see him. And I guess Sinkov had spoken to him. And well he said, “Yeah, do that but (B% stamp) it with a number so we can pull it back in the same way it was if we need it.” So I (XG) an Australian soldier sitting with a library stamp there, something that would give progressive numbers and he went through every one. And Doctor Sinkov and I then talked about when should we start. What date. He suggested that we better not start on the... it was before the new year, because there might be changes at the end of the month. So I think we started about seven days or so, at least, before the end of the month of December with the traffic for that. And so I came in in the evenings to sort this because I was at that time I had a room right... well I was living close anyway. At the one place... I could walk, easily. So, first thing sorted by... each four-digit system had a discriminant, so I sorted it by discriminant and then I decided I wanted to get all like messages together. All groups together. And so I sorted it on the repeated group. We decided the repeated group would give us the best sort because, after all, they already had a check on it. See, this was about the third group of the message, which was repeated at the end of the message. It was obviously an indicator of some sort. So I would sort on that group. And that would throw all the groups together. The very first night that I did that, in 3266 I ended up with 16 messages there that were the same at the beginning but were different lengths. So I took that to Doctor Sinkov immediately the next day and said, 'What do you do with this?” And he said, “Well, you value that out. The beginnings the same, together.” And then he said, “You take one of these columns.” And he did it, of course. “And difference it. And then take the next column and difference it. And then equate the two columns.” And he said, “Compare the difference between the messages.” Some of them only had one group on them. And the other

somebody put a group in. So the rest of it is all the same. Well, we worked on that. And I guess he did... some of the work... all of most of the work himself. Anyway, we ended up getting it all equated and of course Washington at once about it. And they immediately (B% looked) and the day before had two more of them, see. So we ended up with 19 deep. The thing was 19 deep - 3266. Well, then Washington had their stuff on (C% IBM) already so that they could look for any other messages. There might one... same at the beginning but one or two different. And they found a couple of sets like this. We found one set too just by the sorting I was doing, I think. So everybody had hammer and tongs to get that back to the basic code and so on. And I remember that we had about 100 groups there. And Washington in those days seemed to think you subtract this group from everything. And you go back to basic. And I asked Doctor Sinkov how there can be (xg)? And he said that there should be pattern groups. Like 2244 or 4422. Or the Navy number groups in which a number is actually in the middle. And so I looked over it to see... and I didn't like what they had really. I wouldn't have even have gave the pattern groups. (xg). I found one that gave some beautiful pattern groups and the numbers in them were there. So we sent that one back to them. It was the right one. And the only trouble was, we really didn't have enough volume. About that time, I think, before we got through with it anyway, Zack Halperin had his machinery working and so he looked for... well he took these groups we had that were really good additive groups and tried to fit them on any other messages we had. We just didn't have enough. It was... later we had thousands but we didn't have that. Then it came (C% O) March and the system quit for two weeks. Not a single 3366. And then it started in a mode. Still 3366 but there were certain characteristics that we could... (1g) changed everything. I don't know about changing the code book but it changed the additive book the and the way it was enciphered and so on. It was a real, compared to now to what would be more classified. So, the way that indicator worked, at that time, they were taking... they took the used digit of the group (xg) the repeated group and looked up a group in the... two groups in the additive book and added those to the indicator groups that were (B% booked) page, and no call no call beginning with how many. And added that there. So that was a tough system. You needed a lot of additives before you could begin to read indicators. And in addition to that, we found out that by looking at messages that had been sent one day and then resent a day or two later with crypto change that those groups had changed. And from this reasoned that there was a daily super additive put on that. And we didn't have quite enough there to... well, (2g) let's equate the whole month, you know, these changes. They change Tuesday to Wednesday... I mean first to the second to the third and so on. If you had enough of those resends, you could equate the whole month and get a bunch of stuff on the common base anyway. But we didn't have enough to do that either. And so... then it quit. And that was... it had been very hopeful. We were actually starting to get a quite a few values and we had the parenthesis

and things like that and it was a big gift anyway. Of course we couldn't do a thing with any of that before. At the same time of this, I was sorting all systems: 2468, 7890, and 3366. The three main systems. I sorted all of them. There were some... perhaps some, I don't know, 6668 or something like that. But those were the main systems. And I was sorting... every night I'd still sort those while we were still working in the daytime on this... trying to expand this (B% break). And I hadn't sorted 2468 more than a few days before I went to Doctor Sinkov and I said, "This stuff is... the first digit (2g) group in this 2468 is non-random. When I sort the (1g) columns (xg), I get a power of a nine in it almost, then I get a power of 10. Then it repeats the same thing everyday." I told him that. And he just remembered. He didn't offer me a... there was one other thing different about the 2468, the repeated group was not the third group of the text. It was the second group of the text. Whereas all the other systems the third group is repeated. And I didn't know it then, but that had just started in December. That was... I didn't find any mistakes on that. I didn't find any mistakes with the code... actually, I realized what I was doing... what we were doing then and after we found out... especially after that first night when we found the 3366, we were looking for code (B% cook from the States), hoping that... but the Air Force made the mistakes, see. And when they changed, they didn't make any mistakes right off either. And the other people were surprisingly good discipline because they didn't... none of these one-group offset messages. They were very, very infrequent and I didn't find a single one in the amount he was getting. Maybe if he'd gotten it all we would have gotten some. But Doctor Sinkov remembered that. Actually, the 2468 was solved in parallel at Central Bureau and in Washington. Now that was our tip-off on that system and the reason we looked at later, when we got the IBM. In India, somebody did the same thing. He sorted it and he found that the first digit of the repeated group was non-random. And he sent a paper to Washington, and we got a copy later, saying "this digit is non-random. We think it is plaintext." But it obviously couldn't be plaintext because... if he'd said the underlying plaintext, he'd been right but he just said plaintext. It didn't help us any, except that... he gave a sort though, he had a graph and he showed the... the seven-day sort, see, and how big... how many ones, how many twos, and threes, and fours, and zeros he's got in that position and the thing was just like that, see. And it was useful to me in that it was... I looked at it and obviously it wasn't plaintext but he didn't give any explanation further. It didn't help that way but it was the first period of the 2468. He'd started with the... earlier in December. He started about the middle of December and I started on the 25th, or 24th, or 20th or somewhere along there. So, I thought that shows me what the first period was like because by that time I'd noticed it had changed every few weeks. One day I was sorting and this one was low. Then one day I was sorting the one was high and the three was low and something like that and it stayed that way for several... at least three weeks. I've forgotten how often it was. Maybe it was six weeks. But anyway, obviously there were changes that took place on that

period. Well, he didn't say anything about changes in his book. All he did was tell Washington about this. Washington said, in a telegram, “we've received this. We'll make an IBM run to check it.” And then the next thing we got from Washington was “we made an IBM run and it's flat.” And then about that time... one day in the daytime I came across... (C% Schiflland) had a bunch of traffic in his hand with a red pencil and he said, “You made a lot of work for us.” He said, “That system you told Doctor Sinkov about, he's making us edit it all for IBM punch.” And immediately I started... remember, I hadn't told them anything about this changing, see. So I went to Doctor Sinkov at once and I said, “I think you should somehow put in the card what period it's in, because I saw it change every few weeks. And I think if you sort the one period against the other you'd be wrong.” And so he said... he was kind of peeved that I hadn't told him and he said two things. He said, “First”... well, one thing, “talk to Halperin and see where to put it in the card so the editors can put it in.” And then he said, “Make sure that you find the exact time of change so that the editors will have the right ones in the right periods.” And I remember talking to Zack. It was hard because he'd filled that card up putting things in there and he had a lot of work trying to make room for it but he did. And I'm just (B% howling). I remember the trouble. And then I went... that night, I went to get at this stuff and see how I could... it was near the end of March then. And how I could tell the... well, I thought I'd find it out until noon. Didn't really change at midnight or something like that, see, a date wasn't enough. So I'll find an exact change I'll do two days before, two days afterward, something like that. Finally I said I'll log them so they could look at the log and see which one goes where. And when I started the log up... after I'd logged a few messages, I noticed that there was a correspondence between the group in front of that repeated group and the first digit, the first digit of the group in front of the repeated group, and the first digit of the repeated group. This digit in front would only be followed by a limited number of digits in the repeated group. So I said, well that was out... one to ten, or zero to 10 or something like that. Or zero to nine. And just put the digits that occur after each one after it. When I... all digits have just three digits after them. Later on we found out they only had three books in the code book and that was those three code book digits being represented and they came in just three columns of the square. It was enciphered, basically. Well, all I had was these three columns then and I went to (1g) period and enlisted them and the third period too. I think I did two or three. And then I said that I'll just give this table to the editors. And the first time around, they'll belong to the first period and the next one, the second, and the third one, it's the third period. And that was right near the end of March and we had... I'd started an exchange with Washington, just started a month or two before. Maybe that month. An exchange of cryptographic information in a written report every month with Washington. This exchange would take place. I think later on, I think there was, perhaps, some with GCHQ and others - and WEC. But at that time, it was only with Washington. But also but what made... Colonel

Sinkov said it was more important than just to send it by (B% safe hand) so he sent a telegram to Washington containing these three columns with information about the period. Then we continued our work... got the stuff on IBM. About the sixth of April... that was the first of April we sent that telegram out. It was April's Fool Day in Australia. When we got the IBM out then, made by Clark at... major... Harry, no Larry Clark? He had asked (B% Dwight) to ask him. They looked at this IBM run in the morning of that day. He noticed a correspondence in the group after the repeated group with the group beyond it. I guess he noticed a bunch of doublets. Every time he had a doublet in this... you pulled one group, you have a doublet in the other group. So he and Dwight listed all 100 possible two-digit things and opposite then the correspondent. You'd list one group and then the other group. Of course, they ended up with 10... 10 two-digit groups for each two-digit group in the other group. Then they... I think they kept at this until, it must of been one or two o'clock because I'd gone for lunch and then they went to lunch. At least... yeah, they went to lunch. I was wondering what they... I hadn't... I was working in another room, still on this 3368 stuff. So I went in to look at their stuff that they'd put down there. I thought that I'd like to get a copy of this. I saw the copy of that, it was too much. I thought that I'd never get this done. So I thought that'd I'd just put down... oh, I guess I did it by... I took it by single digits. I put down a digit and everything that goes after it and the next digit. One through 10. When I got done, I had a 10 by 10 square and it worked... everything fitted on it, that they had. About that time, they came back from lunch. I showed it to Clark and he took it and then he spent the rest of the afternoon checking it. And then, we all went to supper. Of course, there wasn't that much left because by the time they got back from lunch and so on. And of course, I'd already made my advice and so I came back after supper to work on it. We had the... I don't know at that time. I guess as soon as he saw the square, he said “well, if this square is a square, those three columns that you've got must be in it.” And he said... and then he (3g). He said just a regular (C% tel). Take two digits from this column... mine were mixed up differently, see. They didn't have the same order from top to bottom. But you take two digits in one and compare them with the other and so on. And you soon found the three columns. But that was the way it was. When I came back... we... I assumed that they'd said book, page, page, sum underneath... on the first... of course that was the. You know, I guess that other (xg) was to be expected. I think there had been one captured message form come through - 5678 - and I think that was the way that was too. Anyway, assuming that, I was trying to get... I came back and I was trying to get the... identify those three columns, see. I thought... was looking in the IBM runs, a pattern run, one that sort of... it would... I was looking, actually, for one... all of those things. Hoping it might be 0000 or something like that. And found... .and Clark called up and he said “Is Richard there?” and the fellow answered “yeah” and he said “well, tell him to go home!” Then he called up again and he said “is he still there? I'll come in.” So he came in and after... the two of us

together soon had the coordinates on the top. So we had the square with coordinates top and bottom. Then we went home and the next day we sent this to Washington in telegram. That was the seventh of April, I think. That same afternoon, we got a reply from Washington "send us two squares." And said, "we had this out before you did."

Farley: Oh, yeah!

Richard: Afterwards, I found out that that was the truth. We sort of doubted them then. They had gotten it out. Now, that was the way it was done in Australia. And as you can see, there was no help from the outside for us. We would have done it all the way through whether there had been a Washington, a WEC or anything. We passed the system, we IBMed it, we found the things wrong with... that were not random, and we solved it. Well, Washington were alerted [sic], first, by this WEC because they weren't sharing the traffic the way we were. They were just IBMing it and then I don't know... just having to look at it later perhaps. There was nobody that was really sorting it when it was fresh and catching these changes and so on. Well, as soon as they went off the (B% beam), when they threw all the periods together, they didn't know there were changes. As soon as we told them about the periods and sent them the three lines of the square, the (B% light flashed to Curtis, Stan Curtis), and he immediately had a resort and got the squares out in... because they had the stuff ready for IBM. They probably had the stuff out the next day. And then there was a higher authority put the (B% inference) in. They said, "The British haven't been quite frank with us on all this stuff they are getting about the INIGMA. We'd like to use this as a bargaining tool with them and get more information about the INIGMA." And the people there said, "Well, that's foolish. The Australians will have it out in a couple of days and they'll tell everybody." Of course, we didn't know about this. And Major Stevens, who was the liaison officer from London, was there. And he was running around trying to find out what happened because he knew something very exciting had happened. And he said, "Well, it's good they did told you that... " One thing he did say was that "suppose I tell you that WEC had solved 2468?" And who ever he was talking to said "I won't believe ya." So, anyway, of course when our telegram came through, well that ended all that nonsense. Immediately, the decision was made to divide up the effort by recovery. Washington took charge of this. They said, "You do pages number... " because we had solved the indicator and we could now super-impose the pages of the messages, as to page. Get (B% [redacted]) and solve it and read the messages. So that immediately, all this had to be done and it was more than one agency good do by itself, or at least not too swiftly. So Washington said "Well, you take certain hundreds of pages and we'll do certain other ones." I guess our additive book had 3000 pages in it, maybe. (B% Three) books. So that was the way it was then. And recoveries were exchanged every day in the code book. So I remember Al (1g) was there then because he did most of the work on the recovery of that system. And he used to complain. He said, "I

(b)(1)
(b)(3)-50 USC 3024(i)
(b)(3)-P.L. 86-36

wish these guys in Washington wouldn't recover any groups." He said, "I spend half of my time checking their values and they are half wrong." And well they were beginning, beginners I guess. And both of them were getting a feel for the language. He said, "It takes longer to check a bad one than it does to make a good one." And then afterwards, when we did capture a few message forms in the system, he was very pleased that his recoveries were almost exactly on target.

Farley: Good.

Richard: And that was... that opened up... knowing how that one worked, it was possible to know how the indicator... before that, we didn't know how the indicators were concealed on the other systems, on any system in the Jap system, after that 248... I mean, 3366 had quit. Obviously something else was being done and we couldn't figure out what it was until we found out, recovered this square and found that it was used on the 2468. It was reasonable to believe that all the records were... .and that the... we had done enough work, (B% Steve) had done enough work to know that the 7890 and the predecessor to 5678 on it, had used a square to encipher the starting point. And also, it was possible, from just TA and comparing this kind of sorting that was doing and the resend, that there was a three digit... that the groups chosen as keys for enciphering the indicator were chosen from a thousand group list and not from the whole code book but from the whole additive book. It was a thousand group list and that was workable, see. And Washington immediately started on that and worked... with Central Bureau too. But Washington did most of the work on 5678 and 7890 while we had our hands full with 2468. It was helped along by... I think certain things were found in 2468 that helped. I know that there were a bunch of at least six or more messages that were sent. Identical messages sent in 2468 and in 7890, which helped a lot on recovering some of the first groups, code groups in 7890.

Farley: What was that, was that the Army system?

Richard: Yes.

Farley: 7890?

Richard: 7890 was used from army headquarters down to division and perhaps independent grades of some sort. (B% They didn't come under division.) Now from division downwards, they made up their own, one-time pad systems. From regiment down through. And (B% they were read) instructions on telling them how to make these up so that it was really hopeless to try to get (2g) and stuff, being that... they didn't have to. Of course everything was one command and so they didn't pull out their liaison between companies... regiments or anything like that very much. They... within their division, they might have had one-time pad sidewise but everything was... they couldn't talk to a company or division from... regiment from some other division. And I think some of their attacks, perhaps, were not very well coordinated because of that... a lack of liaison.

But I don't know. I couldn't say for sure. But certainly there was... that was the reason why we, although we tried. We kept careful check of all code books captured and titled and so on, hoping we'd find some that would be used by the lower echelon and give a... that we'd be able to use in reading the echelon stuff that... .but it was impossible, really. It was... that much was one-time pad and as soon as you captured any of that lower stuff, the whole unit was either gone and another (2g) began or, as I said, it was pad and they couldn't use it again. While I think that the unit got censored from time to time, by higher-ups or consumers at some level, saying "you should read the lower echelon stuff." Particularly, I think, the people who took over control, operationally control. The SSO people, they said that. We knew it couldn't be done and they just, evidently not being cryptologists, just said do it. And there was, I think, at the time... I know there was pressure to try to get us to try to work on that stuff. And also to quit doing the higher echelon stuff that we'd broken into. And we always felt we had a right to work the higher stuff.

Farley: What was the intelligence in the higher level? Was it useful intelligence?

Richard: Well, the 2468, of course, was the system assigned to the Army Transport Service. Now, the Army Transport Service had been given about a third of all the Japanese merchant ships. So they owned and they controlled them. And they established anchorages and sent convoys and so on. Messages in this system would tell the convoy points of route, that they'd would be at noon, they were to be at a certain point and sometimes for a couple of days. This would be given in a message and occasionally they were read beforehand... how much. And also, of course, there was barge traffic on it, I think, too. I don't know how it was used except that I didn't... have heard, that our air force down there... (B% Kenney) used it a lot. I don't know how we got a... Washington, of course, read the same system and no doubt they had a chance to give it to the Navy right off but I don't know just how ours were... how the (B% Army transport) got to the Navy. I'm pretty sure the Aussies might know... must have had... must have been a way to get it to the Navy. It happened in 1943, that we started to read it and that was just... the Navy was getting their torpedoes to work. Before that they weren't any good and so it helped and coincided a big increase in sinkings. How much of it was due to that... it was a third, as I said, it was a third of the Japanese merchant marine and how many tankers and things like that that they were really after, mostly. It would be some anyway. Of course, 7810 was the Army command one. As I said, it went down to division or independent regiments or something like that. You could tell, perhaps, (1g) if it didn't go to a certain spot then it didn't have a big enough commander there to get it. It told everything... a lots of... about a tenth of the messages we had were of vital information. The rest of them might be supplies, formations, things like that. But also, there were intelligence messages went over it.

Farley: Oh, were there?

Richard: Yeah.

Farley: Let me switch tapes. (TR NOTE: Mr. Farley changes the tape at this time.)

[End of Tape 2, Side 2]

[Tape 3, Side 1]

Farley: (cut in) ... intelligence information in Army messages?

Richard: Yes. The most... the best intelligence came when we had captured... the Australians chased the 20th Division out of (C% Seale) and, well, the Americans were leaning in on them too and unless they moved they'd be surround. They were told to get out and went into the hills and around. And they went so fast that they didn't burn their code books. They took the covers off, put in them in a tin box, and threw them in a (B% puddle) or bomb shelter or something. Maybe it was in a latrine. I don't know. Anyway it was in water. And some Australian noticed the corner of the box sticking out of the water. The story I heard. And so they hooked them out with a stick and found... well, there were other documents in other boxes in there too. But these were all code books that were the... the current additive book and the current code book and, I guess there was more than one copy of them. And then there were other additive books in there too, either old ones... I think some old ones. And I don't know about a future one. I think it maybe was a future one. But at least a current one. That was in just the beginning of February or in late January 1943... 1944. Yes, that's right. We had just moved to the Park in Brisbane. They moved... they (B% built) the huts and they were so new that they had a little tool-making shack there and they had some bamboo stays in it, but the stays had never been used for anything. So when this box arrived, we had the ovens full of dirty wet code books, drying them out because they were sopping. And of course (xg). But also, we had a few heaters and we put the code books up on the tables and the heaters on the end - these were just single-bar radiant heaters - with fans too, in front of the heaters and spread them open to dry them out. So we spent a day or so just drying those out. But the code book was immediately... as soon as it was dry enough to photograph, Lieutenant (B% Holmes) and his people photographed it and sent... well, kept a copy and then sent a copy to different centers like Washington. As soon as it was... I think Carl... had made the IBM, punched up the code book and the additive books, he sent them on to Washington. He didn't keep them. Of course we were... meanwhile we'd sent them the 1000... what they needed to read... to key the indicators on all the messages. The 1000 groups that... the re-encipherment groups had been sent on by telegram. And so they could get all their messages ready to... [redacted] ready to read as soon as they got the additives. It was a method of deciphering them by IBM without the... once you had the coordinates and everything out. And now I think that Otto and his people immediately went to work at translating the code book so that the IBM could print up English meanings out on the

(b)(1)
(b)(3)-50 USC 3024(i)
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decoder... on the Jap decoder, (xg) English meaning and I think the code book was sent on too. And that meant that we read everything currently or at least as currently as we could process it until the end of April. And for instance, when MacArthur went into the Admiralty Islands there, there was a special group, and I was one of them, that was assigned to decode all the messages intercepted to and from the Admiralty Islands, immediately as received. They didn't wait for the IBM. They were sent by hand. Fortunately, the messages didn't say very much so... the Japs weren't like Americans, I think. They don't say "well, I'm going to do this and I'm going to do that." They just say they are going to die for the Fatherland or something like that. They didn't... oh, one thing that we did know though that they were (B% impending) reinforcements being sent over from Rabaul. We'd known about that right off. It was in those messages. And it really did talk about the assault and so on, I think, but they didn't have the exact information that I'd kind of hoped for. It wasn't that exciting. And then of course... now, we are speaking of... of course, all of the books that have been written now like the... for instance, the last one I read "The Eagle Against the Sun" by Duncan... Spectar or something like that. He was saying how there was no liaison between us and the Navy. And (xg) about him. But that wasn't so then because immediately we got there and we needed translators and the Navy offered us two of their best translators. And they came up and worked until the current stuff stopped, several months of it, about two months. One of them was a (C% Commander La Bear). I'd forgotten. He was a good translator. The other man wasn't not quite his caliber but he was good enough to sort the traffic out and see which was... how good information right off... should be read right off and the rest of it... the other stuff could be left for translation. And so that was a big help because we didn't have any translators in those days. And I guess Washington was swamped too. But they did read the intelligence estimates from the general in charge of... in the (C% Redak) area, well actually, in the Hollandia, Redak, New Guinea area. And his estimates were always, well, the Americans seem to be planning to attack right here, see. And then the... if they mentioned Hollandia, they'd say, "well It's very improbable. Most (xg) under attack in Hollandia." And so that MacArthur knew that Hollandia was undefended, practically, and the Japs weren't expecting them there. And also by (C% Itopi), didn't know there wasn't too much there. Once he had plenty of... destroyed on the ground all the air... all the Jap's planes... hundreds of them. About 400 planes he caught on the ground there at Hollandia and at Itopi. They knew they could move in and did so while the Japs ran away (B% at time). In the end, anybody who was killed, I guess, probably stumbled over something. Although there were thousands landed there. That lasted for some time, so later on they read about the Japanese walking up from Redak to Itopi and the plans of attack and postponements and the final date and so on. So that there was... they were completely prepared for that attack. And then also on one of the islands, there was a (1g), I guess. There was an attack about that time and that was all read about. And in

India, (B% Simms) was... his people should have been and I know that he's mentioned something about getting the information on the Japanese intentions at the time of (C% Inpo) and (C% Koemha)? Well anyway, the Japanese, in 1944, attacked and came almost the border of India. And he was... he had all the information. I think, though, my impression was that he was hampered by not being sure how well he could use it. And he said something afterwards that he would have done things differently if he had it to do over. And I think the British ULTRA security, which was burned before reading or something, had a... don't do anything unless you can have another cause for the... another source for information... credit that. But he hadn't made as much preparations as he might have. I know the Japs gave him a hard time there. Although any Jap attack was very hard to stop. They didn't... but anyway. Also, Nimitz used it because he was about attack some islands at the time and all of his men said... he asked them where to attack. They said "take these nearest islands." But he... well, I guess they didn't have any... maybe they weren't told about the decodes but he knew them. And he said, "No, were going here to (C% Clarton) and they went... the Japs had been reinforcing the outer islands and they just bypassed them and they took the other fairly... comparatively easy. There was one set of islands in the Pacific they got fairly easy. And that helped all the way around. The capture. Akin was... well, I don't... there had been a... in charge... at one time he was in charge of the Second Signal so he was familiar with code and cipher work. And also, he was quite taken with it and he did his best to help with it. And he had a special (2g), a special file established of all messages that told about... in which the Japs told about losing code books. Destroying them or... of course, what he wanted was to pick up some more. And (B% one was like that was)... of course he had emphasis on people in the forward echelons to pick them up. And there was a story about a Jap barge that had some code books on it that was sunk up there somewhere near Hollandia. (xg) But it sunk it in shallow water. So that the... so exact was the information given where it was that our people up there found it and sent a diver down and got the box up. It was... all the code books were in a tin box. Recovered it. And then Holmes had the job trying to... here he had these code books that were still in place. I mean the (C% leaves) were still in place but how were you going to get the leaves apart and get the code groups and the additive groups out of them, mostly the additive groups. It had the next additive book in there. And so, he tried photography and it didn't work, (xg) or something like that. And being a chemist, he tried just coding a couple of groups with (2g) splits. That what the Aussies... that cured everything. And it would work because... for two seconds there, while alcohol was drying, you could see the print quite clearly. So I think he, Holmes, must have done it himself. I don't know who put all the leaves... flaked the leaves off. Put them on pieces of cotton. And then we spent... teams (B% of fellows) spent a couple of days there, just putting the alcohol on and one... put on the alcohol and read the numbers off and get it written down. And so we got those and they were good enough to

read quite a few messages with. But Akin was always, I think, it was when they captured other places... in (1g), after Hollandia, they picked up some books too but the Japs never... you never actually got the current one. They didn't use... it changed soon after they were... since things happened. The reason the ones at (C% Teo), they did not change for that, was that the people at Teo had taken the covers off and sent the covers in, telling the cryptographic people in Japan that they had destroyed the books. And that was a general way of doing it. Take the covers off, send the covers in. And of course the ones we got were without covers. We had to identify them but that was no problem. And there were various other captures that helped like a lot of message forms were recovered in Baguio, I think, or someplace like that. All of the recoveries up until Okinawa were done by Central Bureau people or by Australia... or people attached to it. In Okinawa there were code books found on... burning, but only charred, by groups sent out from Hawaii. The idea, I think, was actually... well, it might have been the colonel at Hawaii. He was... he came had come visit us once I had talked with him. He was quite eager, trying to get things going in Hawaii. But, it was also (C% Howard Friedling and Hyman Hart), the two officers that were there. They had sold the idea of looking for code books there too... the colonel there and also the ASA... and got themselves sent there. They weren't welcomed by the Signal Officer in Okinawa. He wasn't in on the crypt part and he had no experience with crypt analysis or any sort of COMINT and so he gave them other duties and they had to actually get permission to... they had to go back to Washington on their own circuits and have Washington tell them to send them out to look. And they did find it. They were lucky that the did find it. And I have since talked with a fellow... well, maybe we'll talk later about support in the field by Central Bureau. Those people are (3g) Okinawa and so on. Those people, they only went to Okinawa without any signal intelligence units with it. And they created one just by taking some signal corps people and telling them to start intercepting the Jap army. I know that because a fellow that was with (C% Wheatley) said he used to walk all... he was an enlisted man at the time, a colonel later. I think his name was (B% McBride). But, he told me that he used to walk over to that other center and work with them. And he had some knowledge. He'd done TA in Hawaii. He had, I believe, he might have had some materials with him. But they finally got the Army units so that they could identify them on a network. He said that they could... as the American army advanced, they could see these outstations disappear and finally the whole works were gone. And he said also that they then... he might have had some information about Manchuria. But he said that they did pick up Manchuria, which the Russians had moved in there. And I guess they came on the air then. I don't know whether they had been on the air before or not and how much they were on the air. Certainly, once the Russians came on, they were on the air a lot. And so they picked them up and he said he saw the same thing happen. That, the net gradually disappeared as the Russians swarmed over them. But imagine

sending a whole army to a place like that without COMINT support. And we, of course, when we were on the Philippines we had Australian units and U.S. units with our own TA people and certain cryptographic people with units too. And, how they... this guy said he was thinking of writing something about the lack of support and he said, "Well, I told them, well the Philippines (B% had tons of) support." I thought so anyway. And I said "if MacArthur was in charge of (B% bases) in Japan, then there would be plenty of COMINT support there." He thought, well, there wasn't... they'd be invading without any support. How much you could do, I don't know because (B% it'd be long lines) and how much traffic there would be on the air... I know that this fellow writing about... in the book Eagle in the Sun, he even takes a stab at Central Bureau by saying the... about the support to the army in the field... COMINT... ah, tactical information coming mainly from the intercept units attached to them, which was done on purpose. I mean, Central Bureau sent them up there. It's true we didn't control the air force ones very closely but certainly the Australian ones and the Australian air force ones and our own army ones were guided by and aided by Central Bureau and the other people were exchanging values on the... (B% Soviet) air force

Farley: Joe, did you use the term "ULTRA" over there at all, in the CB?

Richard: Top Secret ULTRA, yeah.

Farley: Did you?

Richard: I think it was stamped on the translations.

Farley: Was it?

Richard: Yeah, oh yeah. It was some kind of codeword. It might have been a different one before ULTRA but... and afterward. Yeah, it was there. It didn't mean as much to us though.

Farley: I didn't...

Richard: The Navy used ULTRA. I read once there was some (B% bags) sent from Melbourne to the Philippines addressed to the ULTRA section.

Farley: Yeah, I saw those.

Richard: Did you?

Farley: When we were loading up in July of '45, moving to San Miguel. There were boxes all over there that said ULTRA, ULTRA, ULTRA.

Richard: Yeah.

Farley: I asked what it was and the person got all uptight and said that that shouldn't be on there.

Richard: Well, it wasn't our stuff was it?

Farley: Yes!

Richard: Oh, it was ours?

Farley: Yes!

Richard: Somebody put that on?

Farley: Yes. It was ours.

Richard: Gosh!

Farley: Anyway, let me talk about Akin again.

Richard: Yeah.

Farley: Was his only concern in developing intelligence to keep MacArthur supplied with as much COMINT as he could?

Richard: Yeah, but he preferred it to go through him.

Farley: Okay, that was my next question.

Richard: He was a real... everybody was really trying to horn in on the intelligence. Of course, was that useful and who ever got it, would get that much credit. But everybody was trying to get at it, I'm sure. That was, actually, what the SSO people were crying about. Because... of course we were working... we did list discoveries. My feeling was, we had a system for handling COMINT well in place and was working fine before the SSO came out. And then they came out like, like they said about Montgomery, "Christ cleans... comes into the temple" and they said that he... the fellow that was in charge there in Brisbane, he said "I'm going to upgrade the CB translations." And this upgrading meant that he waited... .he'd hang back until he was sure that either it wasn't going to be translated at Washington or he got the Washington translation. So that Douglas... he was... he had (2g). No wonder he wasn't welcome there. And what Akin did, as I understand it, was he made sure that he got a copy of all translations and he had some fellows like Trist Johnson and somebody processing those and all of them that were important got on his desk, right off. Of course, he was in charge. He had a right to see what his unit was doing. And then if there was anything there important, he'd walk right into Sutherland or MacArthur and make sure they knew it.

Farley: Would he bypass Willoughby?

Richard: Oh, yeah.

Farley: He was the J2?

Richard: Yeah, well, Willoughby got his through the intelligence people, the SSO, I suppose.

Farley: Okay.

Richard: Yeah, oh, I think that anything very important would bypass... I remember that Willoughby was... well, I guess he knew (B% I later) cooperated more. But I remember in Australia, Erskine told me of going down with a hot message when we were both getting them. I think about a convoy. To Willoughby, who was in the (1g) Hotel. It was a weekend. Willoughby was having some sort of a supper or something in his apartment. And of

course, Erskine was only a captain or so there. Maybe a major. Anyway, he told... he had it and he was (B% scared) of going to the door, but Willoughby wouldn't talk with him. Wouldn't do anything about it. Erskine said he took it out and went to Kenney, who would act on it. But that was... Willoughby, of course then, was not a COMINT man and he was in intelligence... helped with agents out and things like that. And of course, that is sort of an insight on what some of the officers were doing there in Brisbane. Of course, MacArthur didn't do anything like that. I don't know about Sutherland. But certainly, Akins was an eager beaver. He was always... in the office early and he got all the work set out and assigned it to everybody. And then he'd maybe take a nap and when we came back in the afternoon with the answers he'd be all set to go. And also, he was a jogger. He usually jogged after a jeep in the morning.

Farley: Oh, is that right.

Richard: On the way in, or something.

Farley: The SSO, as I remember some of the SSOs being there and I think I remember, among others, being told not to tell these guys anything. Be polite to them but don't socialize with them, avoid them. Do you remember anything like this?

Richard: Well, they didn't tell me that. But as I said, what I heard was rumors. I remember somebody saying, “Gee, I can't get this message past that man. He bounced it back for unit... check the units again,” and so on. Of course, we had Australians that were all their (1g) people that did nothing but check the units before they went out and (B% Howard) was a very good translator and he was very careful too, so that... I don't think there were very many... if it disagreed with the Washington one, he was seemed to... he was inclined to credit the Washington translation as being correct, see. And also, I guess that they just didn't want to work that hard. If they got two translations in, then that meant that... more or less difficult, then that didn't place as much work for them in sorting and filing this stuff or (B% memorizing) it. I don't know how much analysis they did down there. I think mostly it was just handling it. It appears, that all those fellows wrote reports back to Washington that are now in the unclassified area that outlined their troubles and justifying their duties there. So, I don't know... none of this justified... it was... he has to claim he is doing something and then proving the (B% file work) and so on. But I think that was... well, what was going on in Washington at the time was a... the SSO people were taking... agitating for and finally got, operational control of Arlington Hall and I take that was... I take it that that was in the Fall of '44 and I think that meant that the control of assignments that they should go after.

Farley: Yeah.

Richard: The (B% change), as justification that Arlington Hall didn't have the big picture and that they weren't spending enough time or effort at getting Manchuria and Japan messages about... being sent into Manchuria and in

Japan and telling about the units there and the fortifications there and things like that. That was the biggest (B% beef), although there were similar things, I guess, about us. They thought that we weren't working the rear echelon stuff and we should be reading that. Well, the Navy could read theirs but we couldn't do that of course. It was impossible. The naval systems at low level had to be distributed to a large number of (B% craft). And there had to be lateral communications and so naturally, they had to be systems that could be read. And while I was always (B% doing a) one-time pad and we even sent a... the Aussies sent a unit in the Philippines a voice linguist, hoping that they would be able to get messages on the lower-level units talking to each other by telephone. But they didn't succeed at all. They... finally, they pulled the unit back as unsuccessful... couldn't... didn't seem to be able... they weren't talking that much on the telephone. I guess that was it and if they did, they didn't say anything.

Farley: Joe, the SSO did receive the output of CB?

Richard: Yes indeed.

Farley: They did?

Richard: Right off. Yeah, and then they'd bounce it back if they thought... send it... get it by courier and then they'd send it back if they found anything at all wrong with it, or they thought might be wrong. Like I just said, unit identifications, or disagreement with a Washington one on a similar message or same message, or... at least they did that at first. Whether they later got mellowed, I don't know.

Farley: Did Akin ever ease up or did MacArthur ever ease up on the SSO troops and finally accept them?

Richard: (B% They never got in the Park).

Farley: I know it.

Richard: I don't think so.

Farley: I know they didn't.

Richard: Well, they were in Brisbane and I guess the... I don't think the trans... I don't know that they ever put out translations up in the Philippines.

Farley: I don't think so.

Richard: Just what happened when the IBM machine we had to move, I don't know. I got the feeling that we never stopped working on the (xg) to do some work, on the local stuff. We could read the... particularly we were interested, of course, in the messages to Rabaul or the Philippines later, and so on. The Rabaul we... was bypassed. We couldn't get the new additive books and quite often we could read that and the main area... they changed to a new book and so that the messages read in the Rabaul... duplicate messages read in the Rabaul area were a big help in getting started in the main book. And so we paid special attention to

getting that and to... the Rabaul book says... they sent them instructions, fortunately, in messages we read. How to change the additive book to make a new additive book to use as sort of one being sent out to them, which couldn't be done. We... one time we had the... this is one of the more interesting things that I did. We had instructions... we read the instructions that they were to use a square, not adding but to take... add through a square in a certain additive book. If you didn't have additive book and you had to recover that as regular, just like it was a new, unused one. The thing was, they were going to do this again to that, see. Put it through a square again, see, so that we wanted to try to recover the original book. But they had taken and altered, see. They never used the original book in the original form. They said, "take this book that you have, that's been captured and everything but (B% hasn't been) used and altered by putting it through the square. Page, say, 30 against page 80. I think they were 50 apart. But I've forgotten now exactly how many. I know that it was such a distance that you just kept going. You'd go quite a number of pages all through the book and go through it again before you finally hit a page you'd already used. And the... I remember we were thinking of how we can get this out. And one night, I thought "Gee, we can do it. We can go backwards, roughly anyway." Go back through the square because the square had limitations, of course, in the column maybe... you could tell from the one you'd recovered that something... by the limitations of the square, you could tell about the two groups that had been combined in that... to produce this end product. And if you went back... took those two pages and went back to the ones they combined with back again and so on, you'd gradually narrow it down by the limitations of the square to a, sometimes, to a single set of digits. Sometimes two. And we put that in our progress report... sent it to Washington. And then when I visited Washington in May, 1945, April or May, I had two weeks there. I guess it was April. There was a unit in Washington just doing that. We didn't have enough people to put on it but they had for the unit (2g) just on... just on recovering that book. And fortunately, I think it did work but there were quite a few errors in it because any error, because of the change, was compounded if they didn't know they didn't know they were on the (B% way) and so on. So, I think, fortunately, some time later, we were in the Philippines or someplace and they recovered the book. I know that... yeah it was used for a while. It was useful. It was worth the work because the messages were read because of that. Of course, when they were read... made it quicker. That was the main thing. It was not that we could decode them and then... if they had these ambiguities of two digits or something like that, they could just write those in and then get the book back. But there are other things that we did. Like, the Japanese, sometime in... I've forgotten when. I think toward the end of 1944, they started to encipher these discriminants. You know, we referred to the discriminants 3366, 7890, and so on. Well, they decided that the was... probably, the TA people on their side thought that was too much of a giveaway about too much easy information by having

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those in the open. So they distributed an additive book to be used just to encipher the discriminants. And of course, because we knew some circuits very well, we could have the TA people (B% write on probable) discriminants and therefore recover code groups. There was quite a big anticipation for it and preparation for it. We had a team that was to work on it. Although, it wasn't to do it better. [redacted] the more messages you had to have, more Just what happened when the IBM machine we had to move, I don't know. I got the feeling that we never stopped working on the (xg) to do some work, on the local stuff. We could read the... particularly we were interested, of course, in the messages to Rabaul or the Philippines later, and so on. The Rabaul we... was bypassed. We couldn't get the new additive books and quite often we could read that and the main area... they changed to a new book and so that the messages read in the Rabaul... duplicate messages read in the Rabaul area were a big help in getting started in the main book. And so we paid special attention to getting that and to... the Rabaul book says... they sent them instructions, fortunately, in messages we read. How to change the additive book to make a new additive book to use as sort of one being sent out to them, which couldn't be done. We... one time we had the... this is one of the more interesting things that I did. We had instructions... we read the instructions that they were to use a square, not adding but to take... add through a square in a certain additive book. If you didn't have additive book and you had to recover that as regular, just like it was a new, unused one. The thing was, they were going to do this again to that, see. Put it through a square again, see, so that we wanted to try to recover the original book. But they had taken and altered, see. They never used the original book in the original form. They said, “take this book that you have, that's been captured and everything but (B% hasn't been) used and altered by putting it through the square. Page, say, 30 against page 80. I think they were 50 apart. But I've forgotten now exactly how many. I know that it was such a distance that you just kept going. You'd go quite a number of pages all through the book and go through it again before you finally hit a page you'd already used. And the... I remember we were thinking of how we can get this out. And one night, I thought “Gee, we can do it. We can go backwards, roughly anyway.” Go back through the square because the square had limitations, of course, in the column maybe... you could tell from the one you'd recovered that something... by the limitations of the square, you could tell about the two groups that had been combined in that... to produce this end product. And if you went back... took those two pages and went back to the ones they combined with back again and so on, you'd gradually narrow it down by the limitations of the square to a, sometimes, to a single set of digits. Sometimes two. And we put that in our progress report... sent it to Washington. And then when I visited Washington in May, 1945, April or May, I had two weeks there. I guess it was April. There was a unit in Washington just doing that. We didn't have enough people to put on it but

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some, I thought, they collaborated and did quite a bit of work on address systems. Now, (B% Linda Berryman or Davis) was, I guess, in charge of the group that would have done the addresses in Washington.

Farley: Yes.

Richard: We didn't have a group that did more than use the addresses. I guess... I think, we just didn't have the people to work on it to start and later on Washington did such a pretty fair job on it that we didn't... then send us the additives right off so that we didn't work on it. It was very valuable information because it told the units that were being addressed. I don't know whether it told the units that sent it ever, but anyway, you did know what number and what division it was going to and if it was going to several different ones, why, they were all spelled out there. And inside, the messages often didn't say this. They'd just start off and be signed by a name and so you had to know who was commanding what and sort of infer from the outside, unless you could read this address. Just exactly... the translation... you couldn't say this was going to the 7th Division for certain unless you could read that address. And so, the message, of course, it just says from blank to blank and it wasn't very helpful at all. Well, I mean, the information may be very interesting inside, unless you know exactly the units involved, you can't really use it properly. So that was a very helpful thing when we got going on... there was... had to read, because you didn't know [redacted] All you had was two or three groups, well or (B% five) groups, or something like that, address and there was a sizeable additive book and I think there were two code books. I've forgotten. I think there were... you could tell by the length of the address, whether it was odd or even or something, which code book they'd used on it. Maybe, we didn't have two code books at first, but later on they did. And I'm not sure but what there might have been at some time, certain armies like in Burma, might have had some of their own address systems or separate ones. I do know that the (B% true captures and work), but WEC did contribute on the address area. And once, I think, they captured... yeah, they captured some messages in the communication system. I guess, it was the actual signal corps, the Japanese signal corps system. Most messages in it weren't very interested. They just said message number so and so, two groups identifying it, and it can't be read, please resend. Once in a while they'd say about callsigns or new stations established or something like that, on a network.

Farley: Joe, was WEC a combined British-American organization or was it all British?

Richard: I don't know the exact... I know we had people in there and I don't know... I thought it was, just like Central Bureau, at least later on. I'm not sure it was to start with.

Farley: (C% Lutwiniak) Bill Lutwiniak was there and (C% Lambros Dimetrious), (C% Callimahos).

Richard: I didn't know... I know that Lutwiniak was there. I didn't know that Callimahos got out there. I'm not sure.

Farley: He was.

Richard: But yeah, Lutwiniak was there. He would know just how it was organized. And I think we did get a monthly, small monthly progress report from them. Just like Washington put out and we put out, especially later on in '44 and so on. But I don't remember, and I was in charge of those things, I don't remember being particularly eager to get theirs. I didn't expect much information that would be useful to us in our area from them. Although they did... we... there were additive recoveries for this address system that we could use.

Farley: Joe, let me switch. (TR NOTE: Tape change).

[End of Tape 3, Side 2]

[Tape 4, Side 1]

Richard: (cut in) ... Brisbane to do this when they moved to the Philippines.

Farley: Is there anything else we should talk about... yes, there is.

Richard: I might give a resume of all the captured systems quickly.

Farley: All right. Go ahead. First, let me ask you a question, Joe, about how much collateral did you use, how much did you get, how useful was the bulk of it?

Richard: If by collateral you mean captured code books and additive books...

Farley: Yes.

Richard: It was extremely useful. One thing that we never got and could have used was a capture on the transport, water transport code. The 2468. We never got more than a few message forms on that. We never captured the code book. We never captured the additive book. I think that we... it was used a book that referred to... had certain code groups referring to Japanese ships. That's the way we referred to ships inside the code. Now I think that was also used by army systems and we did pick up a copy of that, as I remember. But never the 2468 book. And so that was always a recovery. When it changed once, it had to be recovered completely again. About the captures, there were... the most important one was the first one. The 20th Division set of code and additive books picked up at (C% Seol) in New Guinea, Papua New Guinea. That was a code book, main code book, and several additive books. Past periods. Several additive books of past periods and the current one. And perhaps one that they, a future one, but they never used that as was. If they used it, they altered it before we used it. So, we couldn't go beyond the April one - they changed the new one - without doing cryptanalysis. And next there was the capture of a burnt additive book and code book that had been... being transported on a barge off the coast of New Guinea. The barge was sunk and burnt... to the water's edge and sank. And we sent

divers down to... and they picked up... it was in a box, caught behind the stanchion on the surface so it never had drifted away. So, being burnt... there was a limited amount of air. They were sort of charred instead of being completely burnt up. They were just like flakes of ashes, 500 pages of flakes of ashes. They were held together surprisingly well. And as I said, we read it by daubing it, two groups at a time, with metholated spirits, alcohol, and that would give you a couple of seconds to read it. And actually, some of that held together. It was placed on the cotton and bundled up and sent to Washington. It was still together, some of it, when it got to Washington. It wasn't just a bunch of ashes. It could have been crumpled in one second just by crunching it. And then also along the... later, along the coast, behind Hollandia, after we captured Hollandia, I think a (1g) corps, a (2g) corps is a point right in the end. I think some code and additive books were picked up there. And some of them. at least some of the additive books were even useful. But again, I think that they were not... that the capture was... the Japs were aware of it and changed but it did leave some past, immediately passed messages. And then in the Philippines, there were a lot of message forms picked up at Baguio. And I don't think we captured any, actual books but these message forms had the additives written out on them. They were used message forms. They had the code groups and the additive groups written out on them so that and in a bunch of those that were on the these books were immediately usable. And then in Okinawa, there was a group sent out from Hawaii that found several additive books and I guess a new code book. The army main code book had changed in early 1945 and this was the new code book. The hope was that these were some of the additive books and the code book that would be used by the system during the latter part of the year in which the invasion of Japan would take place... did take place. That was hope that these would help provide some current information and because... otherwise, with the new change of the... the new code book and perhaps additive books that we didn't have, it would take a month or six weeks or two weeks... two months to get any messages processed. This could have been a very important... as important as the other or more so but, of course, we dropped the atom bombs and all and the war ended and it was out using these. Those were the principal captures of the mainline stuff. Now, this is something not mentioned in any of the books I've seen about very much, but we read army air-ground and we read navy air-ground but the army air-ground had a code book, a three-digit code book, and we captured, now and then... every time we changed to a new one, it seemed like it wouldn't be very long before we would capture this code book. Naturally, airplanes are going to be shot down and if they had the book in it, why sometimes the enemy... other side is going to get the code book. The army air-ground though, enciphered by means of a daily-changing, 100 group... let's see, maybe a 100 line additive page with about 10 groups to the line or so, of additives. Fortunately, these were in sections, like every six of ten lines of additive. [redacted]

(b)(1)
(b)(3)-50 USC 3024(i)
(b)(3)-P.L. 86-36

(b)(1)
(b)(3)-50 USC 3024(i)
(b)(3)-P.L. 86-36

[redacted] early in the day on the top lines. And the very top line too. So it was a race every day to find certain routine messages sent early in the day that would give them some additives they could use in the rest of the day and also, hopefully, [redacted]. well, read the messages. The messages they used would be weather messages or... mostly, to start with. Of course that would be something you sent early on the day. So we captured those. Now the navy, I wasn't aware of any of the... there may have been captures, the naval air, there may have been captures of those systems. What they used was a new code book every two weeks, for a while there. At least, I know that was what was going on. That was for the first two or three years we were reading that. But at least that was... it worked much the same way. As soon as the code book changed, and this was in (C% katakana), two or three groups of katakana for a code group. They would start recovery on routine messages. And all the messages would be sent into Brisbane and Captain (B% Main), the Australian navy man we had working there at the head of that section, he and his people would send recoveries out to the stations and then the messages would be read and exploited there, especially near the end of the two weeks. They could read most everything then. And then they would start over. But I don't remember captures of those. And of course, if they would change every two weeks, unless you've got a whole year's future, you wouldn't, possibly, get much benefit from the capture except, perhaps, to confirm your commonly used... each code book's naturally very similar to the previous one in the content of the values. That, again... mention of Captain Main, he was an Australian navy many and he worked with us for years. It was like this “Eagle in the Sun” book, make reference to... .no liaison whatsoever. But this man was with us and he was sent to us by this... for some reason, the navy unit wasn't interested in reading this. The army was very much interested in it because the naval land-based planes were the most important planes as af... for some areas, and the most formidable planes to fight. They were much better planes and much better pilots for a long time than the army air... for the Japanese army air were. So that, it was... well, large numbers of them around Rabaul and also at (C% Ray) and along the New Guinea coast to start with. That was the reason that (B% Brown) and his people were... Colonel Brown and his intercept people started reading... intercepting the naval air-ground because army air-ground hadn't appeared yet. Later on, there was a lot of army, I guess, in New Guinea and Timor and places like that. We had a group that read that also. And also, the same thing happened in that things would be sent down to Brisbane and then they were sent out to the stations, the recoveries, so that by the end of the day, why, they could be reading the messages in quantity. And they would... the army air-ground had systems that were just used... mostly used by planes being ferried to a needed point, see, new planes or new groups of planes that were just going... like one little grouping on an evac, for instance, or later, Hollandia. These... we would intercept these dozen or so planes coming in because they

would come into this place and they'd stay there. So there was a pretty good estimate of the number of planes actually at a point even though we didn't go over and photograph and see them. They might be disbursed but still you knew they were there. So, our air used that as a... as you know, they caught a couple of hundred planes in, I think, August of '83 on the ground at (C% Redak) and 400 planes on the ground at Hollandia just before that landing. That was possible... intelligence on that was... one source was this reading the army air-ground. That was read by the Australian Army, although we had Americans working with them. The back up people, I think, at the unit of Central Bureau were Australian personnel. Of course, our Air Force intercept outfits, when they came over, they learned to handle this code. Some of their people would usually come and be trained at Central Bureau there and then out they would go up north and they would be supporting their unit by... and read directly there. They were independent of assignment by CB, although they cooperated on messages and information. I remember once, reading someplace that the Australian TA people were regretting that the Air Force, the American Air Force, that they couldn't task the American Air Force units like they could the American Army units or the Australian Air Force Units or the Australian Army units. They thought there was some duplication and things really worked better if they had been able to coordinate the tasking. But there was cooperation. And they did do good work because I've heard a couple of stories. One, a fellow there who was with one of the units and he said he had a buddy he used to go to the movies with. This was in Morotai or something like that. But anyway, he suddenly found that this buddy was always anxious to know whether he was going to the movie. And he said, “Why do you care whether I go? You can go by yourself. You don't have to have me go along.” And he said, “Yeah, I know that. But I notice every time you go, there is no air raid.” And he says, “That's the reason I want to know whether you are going!” In the same place (B% some other place) where they were betting on air raids, they (xg) they wouldn't let him bet because he was always right. And he was with... those two people with air units that were intercepting army air.

Farley: Tell me about the group that went aboard the flag ship. These were people from the army air-ground code system. One was Trist... not Trist...

Richard: Chester Young.

Farley: Chester Young was one.

Richard: And he had (interrupted).

Farley: Julianne Rose was another one. And Johnson. Stu Johnson.

Richard: These were different groups, I guess.

Farley: Maybe. Al right.

Richard: The first one that I knew about, and the first one, I think, was this Chester

Young. He was a sergeant and he had a couple of people with him, or a little outfit... intercept operators. And their duty was to try to... and what they furnished... this was Admiral Halsey. What they furnished him was information from any airplanes that might sight him, him and his fleet. They were equipped... I don't know that they were equipped to handle anything but the army air-ground. I know that they said that at least one time they got a message just near sundown from a plane that had sighted them. And that acting on that he did send a message. They knew that the man had sent a message. What the message said, I'm not sure, but anyway, Halsey turned then... well, he continued his... until dark and then he turned and raided someplace else and completely surprised them. He was... Halsey said he was very pleased with these people and I think they put other outfits on... with the fleet at other times. I know Chester came back and I saw him when he come back and he told me that's what they'd done. I read someplace, some remarks about this too, that Halsey was very pleased with them and that they had placed several such small outfits on the fleets so that... Halsey control or else they... perhaps... they use to alternate... Halsey alternated with someone in command. The other people, Fifth Fleet, got it too. We supported and stuff.

Farley: I said Julianne Rose. It was Julianne Roberts who went up as the analyst and Stu Johnson went up as the linguist.

Richard: Oh, is that it? Were they with Chester then?

Farley: Could have been.

Richard: Well, as I said, I know that particular unit but I did see reference to other units in an Australian history of the Central Bureau. So, I think that was not the only case. But it...

Farley: Joe, you had supplemental groups arrive in Brisbane?

Richard: Yeah.

Farley: After you people were there, then came (C% Agat, and Reynolds, Whitney, and Roy Combs) and that crew. Did they come to you soon after you had moved up from Melbourne?

Richard: Not Coombs, he wasn't right away.

Farley: He came later then?

Richard: I think they came after we got so busy.

Farley: Okay, then our group came a couple of months later?

Richard: But there were people there like Joe (B% Alan). Let's see, I remember that... and of course Erskine. Erskine might have come then? Just when he came... I guess... whether he was in Melbourne or not, but he might have been. I had to deal with him afterwards, so I didn't... There was a Captain (B% Hoffman), who was a relative of Eleanor Roosevelt that was a minister at the Episcopal church. He was a good minister. He'd give a good sermon. I listened to him once at the local church. He was a little

old though and I think he had to leave because he got some... he had heart trouble or something. If you look at the pictures you see how your we all were then. Doctor Sinkov was really a young man then. And Hoffman was older than that. He must have been, what seemed to us, very ancient. In his 50's or so.

Farley: Did you parcel out more of the tasks when you got these additional people or did they sort of supplement what you were doing and you could give them the menial duties to do?

Richard: Well, I stayed sort of on the... assumed the duty of all the progress reports and keeping a file on them and digesting them and also reading and publishing all the COMINT messages we received that described how to... changes in encipherment or use of new books or things of that sort. And, we published a section of the monthly report. They'd be those COMINT messages. We did it a little different from Washington who also published them. We always... when we had one that was significant, we'd go back through the files and find every other one that pertained to that system and published them all together. Washington just published (xg) or all of them they got for the month and you sort of had to go through several months reports to get Australia out of it. They said they didn't have time to go through... they did have more messages than we did to handle but I had a small group to work on that. But then at first, I was given the publication... of the... sort of... .not of the messages as much as the progress... progress reports or... (B% Jay Alan) was my assistant in that and later on, when I just went over to these COMINT messages, he took over all the publications. But I don't... I think (C% Maury) came on and he was working for (B% Girhard), I think, and he was working on the 2468. He'd already worked on it back in Washington, I think. There was no, sort of, subordination. The people came out with their rank. They were... most of them... al lot of them had already worked on some of the tasks. Of course, linguists were always in demand. And it didn't take long before the other linguists knew what they were capable of and were assigned to what they could do best. And we were always hoping that we'd read about... some books and we'd pick them up and they'd enable us to read some more systems, especially the lower grade ones, which never happened. Changes in the upper grade ones, like I spoke of that changed the additive books by taking the square and adding one page to another, to that square. Well, they did that more than once... and also changes in systems... like this... I mean new things that happened. The discriminant disguising system or changes of discriminants, things like that. We were keeping that. I had a sergeant with me that was very good at keeping (1g) straight. That was (B% Jacobis). Then I had a linguist with me that was named Don. He was an enlisted man and he specialized in reading... I got so I could... knew most of the words to... titles of the Japanese books. Like (C% tsu dat tsu gut, Caison Hill, and rika gonango sho number 1, number 2, number 3) and so on. One interesting side light though was that I knew Otto Mahrt pretty well. And he knew that I didn't smoke and

also, that I didn't use up the candy that we could buy there and so on. So he used to come to me and ask me if I had any candy or smokes that he could use to talk to... he used to go out to the (C% addis), which was a... where they had a... the agency that translated documents and interviewed prisoners. Whenever there was a prisoner, we had to do the code books. He would go out and talk to him. This didn't occur very often. We didn't have that many prisoners. But anyway, at the Admiralty Islands, there was corporal there, a code message center corporal that was captured. He went to talk to him and he was chuckling when he came back. He said, "This guy is pretty smart." He said, "He's just a little country boy but he could tell what part of Japan we were from." And he said "This fellow asked him, do you have rika gonango sho number 2? If you have, I'll show you how to use it!"

Farley: Oh boy.

Richard: And of course, the Japanese, once they were captured, they figured they could never could go back to Japan, be able to. And their only future was to ingratiate themselves with us. And I guess they like that. But anyway, he was a quite good personality. And so he said... and Otto said... well he didn't want to tell him we had it and so he said, "Well, what makes you think we might have it?" Or that we had it. And he says, "Too many bad things happened to us."

Farley: Oh yeah? The guy realized.

Richard: He said, "I know you got it." But he didn't help us any. I mean, he was... I don't know whether Otto, what he'd do... routine of how to handle it or not. I suppose he did. But a... how to encipher a message, in other words. But anyway, that was about the most interesting one that he ever told me about that he initiated. He'd come up and get a bar of candy from me or something to give to the man... the other men. Anyway, there was not much gained from interrogation in our area.

Farley: Joe, let's talk about the RI units. The 111th, were you familiar with that?

Richard: No. The name doesn't. There was the 112th. And of course, there was 126, 125. And there was one that was changed to an air force unit. Was that the 125 and came and changed to a... ?

Farley: I don't think so.

Richard: One of them was changed... the 1st Radio Squadron Mobile or something.

Farley: Couldn't have been the 112th?

Richard: That was an Army one but there was... it really became that. They came through and changed it. I remember talking with someone that was in that. Oh, it was an officer, I think. I've forgotten... .I don't know whether he's dead now? But he was saying that they had trained in Washington to take German. And naturally, they send them to Australia where they would have to take Japanese. So immediately, you had to retrain everybody to try and take Japanese, which was a different... which had...

well, had these larger letters. They would chatter in katakana and like that. And there was (B% Morse) for those who had to learn. And even the army stuff that we were taking took some relearning. He said he had everybody including... he said some of our truck drivers made the best interceptor operators for the Japanese. And they hadn't made it... but he said the others had to unlearn some of what they'd learned and that held them back.

Farley: You are not familiar with the 111th? Jeffrey (B% Ballard) claims he visited that outfit someplace in the islands. And there was a Captain Poynter, P-O-Y-N-T-E-R, in charge. Ballard is trying to locate this guy. But I'd never heard of the 111th either.

Richard: I'm not sure. It'd have to be in the Army history?

Farley: We don't have very much on it.

Richard: Do you have a mention of it?

Farley: We have a mention of it, yes.

Richard: Was it in our area?

Farley: Yes.

Richard: Oh.

Farley: It was in the Solomon's, in the Solomon Islands.

Richard: Yes? The Guadalcanal and those things? Oh yeah! Well, (B% Patch) went in there. He might have had something with him when he went in. Of course, before that it would be navy support.

Farley: Of the units that you recognize like the First Australian Wireless U...

Richard: 1 U., yeah.

Farley: And the 5th W.U. Of all of those, which was the most productive? Could you categorize that?

Richard: Well, one: the traffic we got from one... or maybe it was the circuits we were given or where they were located or something, but I know... I think that there copy was some of the best we got. I'm speaking in terms of stuff that might have garbles in it or didn't have garbles. I know that one time we were thinking about trying to increase the speed of... we had to relay all that stuff to Washington. You know, we had a unit that did nothing but copy messages on a teletype, cover tape, and then put the teletype on a scrambler, and send it to Washington so that they got live wire, all the messages right off and so they were waiting for Safe Hand. There was a good size hut that was just doing nothing but that. So they thought, well, if we... at the time, they were teletyping the new stuff down from Darwin. And we had a U.S. outfit up there. And the only objection they made about... they thought the American ones, being typed, could somehow cut a tape as they typed or something. Anyway, they could speed it up by somehow cutting a tape right off. And well, the Australian

stuff was hand written. And had to be...

Farley: Yeah.

Richard: And Americans, maybe Americans had the end of a teletype up there in their outfit, too that they... but the thing was, the Australian copy was that much better that they didn't dare... they recommended against changing it. That the coverage was better and the accuracy was better. How much better... but I think now that I would have... had I the power to do it, I would have changed anyway, or urged change. Because usually when you do... I found in Europe, when you give the responsibility to a group like that and told them, well now, you're the best and you have to produce on this that they really do. And I think if there was really any difference they would have exerted themselves to do better and be more accurate than... they would have equaled the Australians. But certainly, they had some very experienced radio intercept operators. Very good. And one thing that the... of course, Clark was the Australian man and he could ride them. He would say... he actually found that they really would... some circuits had a consecutive NR in the preamble. Or maybe there were two? Well anyway, one for that circuit. And so he made it a rule that the operator had to give an excuse why he missed a number. See, he could say for instance, if there was 5 to 10 was missing, why. And after they did that, the coverage was really good. So... and they could... of course, the Australian TA man, I guess, he thought he could do that to the Aussies but I don't whether he thought he could do that to the Americans. And of course some circuits had mixed up numbers and you couldn't get that quick check.

Farley: Joe, there was a unit in New Guinea and Vic Rose and John Thomas were in charge of it. Most of them were WACS.

Richard: Oh, yeah.

Farley: Do you remember that outfit?

Richard: I remember a WAC lieutenant in charge.

Farley: What did they contribute? Were they collecting material and feeding it back to CB?

Richard: I was...

Farley: Now, this was when you were still in Brisbane.

Richard: Yeah, I know, when we were in Hollandia.

Farley: Yes.

Richard: I know there was some intercept up there.

Farley: Was there an advanced CB headquarters in place in Hollandia also?

Richard: Yes indeed.

Farley: So, could this unit have been feeding it to the advanced headquarters?

Richard: They should have been supervising... under that, yes. If you look in your (B% SRS) record I think you'll find a... some pictures there and saying that Ballard was in charge of the advanced headquarters there, for a while. Then he went... then when it became higher than just an advance headquarters, it was sort of a split headquarters or something, and Ballard went on to the Philippines, and therefore Clark was in charge of the Central Bureau Advanced Headquarters... more than advanced headquarters. It was called by something a little bit more than that. But at any rate, it was upgraded. It was bigger and more important while Clark was there and Ballard had gone on to the Philippines with the intercept, the Australian intercept units. He was in the advanced headquarters and that was... maybe that was the headquarters?

Farley: Brisbane was still the rear then?

Richard: Yeah.

Farley: I have a lot of personalities. We'll talk about those later, Joe. And we talked about significant accomplishments.

Richard: But I think that shows liaison with the Australians because here they were in charge of the unit, Central Bureau, that whole unit... advance headquarters, both of them.

Farley: Yes. Shall we move out of Brisbane up to San Miguel?

Richard: Well, I'll try to help you on that but I don't know so much...

Farley: You went home?

Richard: I went to San Miguel.

Farley: Okay, that's right. Let me ask, when was it decided... nope, you answered that I guess. When was it decided to send Advance CB Headquarters to Hollandia? Was that in '45 or was that in '44?

Richard: Oh, it was in... as soon as they had any space there.

Farley: This must have been '44 then?

Richard: Yeah. They landed up there in April, did' they? About April... took Hollandia in about March or April?

Farley: March, I think.

Richard: Yeah, they would be there, certainly, by May or June.

Farley: Was there a split in assignment as to targets that Advance would have and CB Rear in Brisbane would keep? Did they spit up the assignments?

Richard: Well, the Advanced did no reading on the four-digit code. Now, I'm sure that the TA and the air and the air-ground... and the air split. Certainly the ones with the intercept outfits there. Their ground messages were read, when possible, right at the intercept unit because they were only good for a day. There would be something like a... an airplane would go up and go over the target areas and send back weather, which would again be sent

out by a central point to all that might be sending in a plane to survey that spot. That was one way of knowing, for a long time, knowing when the Japanese were planning to raid. You naturally want to know the weather. No use going when you can't drop bombs on anything when it's socked in. So they'd send out the weather over... they'd send a plane early in the morning to take the weather, over a spot where they would be planning to bomb. That was one sure-fire way to know where they were going to bomb. For a long months [sic] that was useful. That, naturally, would be also... of course, there were other messages that gave the weather over the Japanese area... in the Japanese area in the same code. And also in the navy air-ground. Lots of it in the navy air-ground. That was one of the most useful things that the naval air-ground got was weather. Of course, [if] we were going to make a bombing raid, knowing the weather over the target was most important to us too. And naturally, it was a big operation to gather together a big bombing raid and then go out and find out that you couldn't hit anything. So that was very useful information. Of course, some of the first people we had up in the... with the advance... well, like at (B% Seal) and so on... maybe it was... maybe we sent someone up to get those books. Maybe it was Girhard. You might ask him. I think he had something to do with going up and carrying those codes in Seal back to us. Later on, when this (1g) book... we had, I think we already had some... a headquarters up there. It was Major Thompson? Do you remember? He wasn't a crypt man but they used him as liaison with Advance Headquarters.

Farley: Yes, I do.

Richard: And, one of his jobs was to liaison with them and find out if they picked up any books.

Farley: Oh, I see.

Richard: And, oh also I guess, he took care of the or the (B% catering) or the housing and the supplies for any units we had up there.

Farley: Did the Advance CB Headquarters directly support MacArthur or Akin? They were in Hollandia weren't they? GHQ up there?

Richard: Well, GHQ had a... MacArthur had a house up there. Oh yeah! Whatever was part of the staff up there. Oh yeah! As far as I know, either Akin was there if MacArthur was there or somebody instead of him.

Farley: So Ballard would brief Akin or MacArthur or Willoughby?

Richard: Well, I think it would be Akin. I don't know that Akin would let them... he'd probably want to relay any information himself and get the approval.

Farley: How about... let's go back to Brisbane and move to the Philippines. This was probably in June or July of '45. Remember when they sent up the C-54s, four of them?

Richard: Yeah, a lot of people went up in those, yeah.

Farley: You didn't go up with that group did you?

Richard: No, I had just got married.

Farley: Oh yeah?

Richard: And I was staying back there as long as I could.

Farley: I see.

Richard: It was on the 28th of July. And (C% Chris Trist) and his people had gone up. Remember, he and a couple of other lieutenants... some special work they had. I thought they were processing translations and picked out the ones that an (B% agent) might like to see. All the important ones. Well anyway, they had a little house in the edge of Brisbane, somewhere near the (B% Story Bridge). We were just getting married and Chris said "Why don't you take over our house. We're leaving it. And I can arrange for you to meet the landlord and take it over." So we did. And so I had this little place and lived in that for a couple of months. And then when we were leaving... when I was leaving, why, we gave it to (B% Donald Webb). He had just married a girl name Norma... no, Melinda, a (C% WAF). So I didn't go up there until the war was really over.

Farley: Joe, there was a group that went up by ship?

Richard: I went by ship.

Farley: Oh, did you.

Richard: (B% Best) went with me. And I guess that was... I guess that was probably just almost the last year. I'm sure they had liquidated all the... remember the (B% Misslemen's) Club?

Farley: Yeah.

Richard: And I'm sure they had to completely wind that up. It was loaded with people and we had a lot of stuff in the hold. And I remember there was some worry about trying to getting it ashore because it was classified and so on.

Farley: Did we drop off coverage during that move or was there coverage in Brisbane as well as in Advanced or were the Japanese (xb)?

Richard: Intercept outfits moved. Some of them were backing the Army up. Of course, there were several intercept outfits. I was (B% on an Australian) that moved with the Advanced, from (1g) on. With that outfit.

Farley: The 25th was there?

Richard: And I know that... I was talking to one fellow, he said that he was in at an airport when the Jap paratroopers landed and they were hiding. And I don't know if they burned all their stuff or not but they certainly didn't want to tangle with those paratroopers. And they were very glad that the Japanese didn't land any more. The paratroopers were too busy with other things to check up on them or to find them. Then there were Australian outfits there that were reading, I think, the navy air-ground, but

anyway, they were reading air-ground. When I was back in Washington. I was sent back to Washington with Jack (B% Halperin) for two weeks, TDY, in April or May 1945. And Jack couldn't attend a meeting and I attended for him, this was at Arlington Hall, of the big shots. Well, I wasn't briefed for this. I really was no help. They should have given me a little bit better idea of management things there. The one question they asked me was, the asked, "These Australian intercept units at Leti [Leyte?] were given a lot of applause for intercepting and tipping off about convoys coming into Leti [Leyte?] and we'd like to... why can't our Army air force units do that too?" Do the same thing and get the... well, all I could answer... could give them... the only answer I could give them was that I knew the Australians could... were part of their army intelligence. So they could release at once without going through anybody. I know and I thought that... I knew that some of our stuff had to go through military intelligence first... delay it. Now, these messages about these convoys coming in had to be acted on within a half hour or so. But I think since that, I think it might have been navy air-ground. I don't know. These were planes detailed to accompany convoys and just before they'd come into our mark, they send a message saying they were coming in, so they'd be expected. And if you got that message, it would be out on the water where they could be found.

Farley: Let me switch, Joe. (TR NOTE: Tape change here.)

[End of Tape 4, Side 1]

[Tape 4, Side 2]

Farley: Joe, can you remember now, the number of Japanese intercept targets we had when we had moved from Brisbane to San Miguel? Were we still concerned about 2468 and the army high-level systems? What other systems beside the, again, the army air-ground code, how many other systems were we working with... were we exploiting?

Richard: Well, I think 2468 was pretty much a lost cause at that time. There had been so many ships sunk and territory had been overrun. And the books... they weren't all on one code anymore. The traffic had decreased. The targets had decreased. And there had been sub-division in their areas so it was very difficult to do any work on 2468 anymore. And besides, the fact that target... the important thing was Japan and Korea, Manchuria. And therefore, the targets would be changed to... those could be better heard from... of course, from the Philippines, a much better location to hear some of these things. Okinawa was better yet. And I presume that we would have moved in a lot of intercept to Okinawa before anything further had been done to Japan. But the change of target would be... well, of course area, we would try to get... pick up internal Japanese. And of course Korean and Manchurian. But just how much was possible, I don't know. Since Tokyo always was a center, we were picking up Tokyo always and there were multiple circuits into and out of Tokyo. Most of those we could hear were from overseas to Tokyo and back out again.

We'd catch messages going in and out. Also, messages would go into Tokyo. The way the Japanese recruited for their divisions... each division had a home village or area and they always kept a sort of rear-echelon of that division there, which recruited for that division and which, I think, maybe supplied it too in some ways. I don't know just how about the supplies, but there was a kind of a rear-echelon army division. And they used to identify a division sometimes, when they moved, by the town in Japan that they corresponded with. If they knew there was a certain division that always had its rear echelon at a certain village or town or area in Japan, the division moved from one place to another and the message started still... from the new place started to go back to that same spot, then the TA people knew that that division had moved, even if they didn't get the number out of the address in the message. Couldn't read the message. It was just a useful that that (g) Clark and his people used. So of course... we were trying to... that's the reason I think that if he didn't internal Japanese messages, like from Tokyo to someplace in Japan, if he didn't get them, then they must have been going land line for a while. Now, if we had bombed it badly enough there, they must have started to go through the air. I know that was one of the things that the SSA people, like Colonel McCormick, were saying about Arlington Hall, that they weren't picking up internal Japanese. That was in 1944, when they hadn't been bombed so badly. I'm sure that once the bombing, the fire bombing, of all those things started, there must have been a lot more come on the air. A lot more messages. But that would be somewhat similar to what had happened when we got close to Germany. They didn't intercept anything about the Battle of the Bulge before hand. Or not enough to know it was going to happen and to believe it. The same thing would have been, in a sense, true in Japan. You couldn't guarantee COMINT information on the same scale that was available to an overseas position. Like, anything that they had to send by air, like out-of-the-way islands and stuff like that.

Farley: Joe, this is sort of off the theme. Did CB or any of the RI units ever intercept any Soviet communications, at all, at any time during World War II? Do you know?

Richard: I never saw it. The first stuff I saw like that was when I came back after the war and worked here.

Farley: Even before the Soviet entry into the war in the Pacific, did we have any tasking against any Soviet units or was that not even thought of?

Richard: You'd better ask the fellows that ran the Alaskan station. I'm sure that they could have. You'd better ask the Navy people too, because my impression was that the Navy was one of the first ones to start picking up some Russian stuff. I think some of the first stuff I ever saw on it had picked up very super-secretly by the Navy.

Farley: In '43?

Richard: I don't know. Of course, I was only leaving in '45 or something like that, but it might have been before the war was over, in '45. But that's my impression that they had some special name for it and I thought that there people were up in the Alaska area or someplace like that. I don't know where they were doing this. And they studied the Far East. There was material available from them on certain things in the Far East. It was a special name. This was very compartmented here for a while.

Farley: It was.

Richard: But we had no interest and really, you didn't expect from our intercept outfits in anywhere in the southwest Pacific to be able to hear them. Not that the radio interception didn't always work the way you expected. And it may have been that it could have been done but certainly, as far as I know, there was no reserve capacity to be expending on this purpose.

Farley: Joe, I don't think you can answer it but I'll ask it anyway, since you were not there. Are there any incidents or significant contributions that occurred during the six months we were in the Philippines after we'd moved up from Brisbane?

Richard: Six months? Were we there that long?

Farley: It was in July.

Richard: Oh, the war was over in August.

Farley: August, yeah. But then... oh, I shouldn't have said six months. The two or three months that we were there before the end of the war. I came home in March, I think it was in '46.

Richard: I think that that part of the year, unless there's... that was about the same time as Okinawa wasn't it?

Farley: Yes.

Richard: Well, about the time of Okinawa, things weren't so good on the reading the mainland systems. They'd made changes and some of them, I know at least... I've forgotten which one. Maybe it was 3366, which wasn't so important. But it had gone, for a period, to five-digit control. In other words, the additive book that they distributed perhaps didn't have that 1000 groups at the end of it to use in... for the enciphering the indicator and they had gone to using the whole book. Now this was a very difficult period. I remember that we were actually making some progress in it. Jack Halperin would have to take all the messages and run them against each other and find two of them that hit and get started from those two to get into that. I think there was something that speeded up. Either there were some captures... I think that was... things picked up in Okinawa... did read all that stuff but then the war was about over. I know that they had... our intercept outfits had a duty of monitoring the messages passed after the surrender, when the Japanese were told to destroy their additive books and send messages in clear code. The ones in code so that everybody in the world couldn't tune in and know what they were sending,

but wanted it in clear code so that we could read it easily and quickly. I am sure that all the circuits were monitored for some time until we were sure that these people down there weren't up to any skullduggery and were complying and what their difficulties were in dealing with the local people or turning over their arms or things like that.

Farley: Did the people at CB, or any of the elements, intercept any messages from the Japanese suggesting that they were ready to surrender?

Richard: None that I knew of. The only ones that dared to talk about it were the diplomats and some of them were instructed... as I understand it, they were instructed to get the Russians to do it for them. But...

Farley: Joe, was CB (interrupted).

Richard: Some of the army wouldn't dare do that. No one in the army would... because the army was gung-ho to keep on fighting until the last Japanese.

Farley: Was the CB involved in any planning for the OLYMPIC Operation, the landings?

Richard: Yeah. Oh yeah. Oh yeah. The OLYMPIC, I think, involved a... it was granted, a big increase in CB because CB wanted to be able to... and I think this was somewhat opposed back in Washington and I don't know what was going to be the upshot of it. Yeah, they wanted a big increase in the capacity of CB so that they could support the army's going into Japan. They argued over... of course, Arlington Hall said, “Well, we can read just as well back here. We get everything back by electricity anyway.” As I told you, we were teletyping all that stuff back. And so they said, “We're getting it all as fast as CB in the Philippines”, which is a long way from Japan “could get it.” We'd been better off in Okinawa, I think. But anyway, that was the argument going on at the time. I don't know whether any decision was ever reached on that or not. Possibly Colonel Sinkov would know. I know I heard the rumors of that all right. If Washington had there way, we would have been regulated to reading just the air-ground or something like that, or they would have said, “Read the lower echelon stuff,” which wasn't readable. So I think it was a good thing that we never tried it at the time because my own personal view was that if we had skipped the Philippines and gone to Okinawa, (xg) the Philippines and went on to Japan as fast as we could after that, that the Japanese wouldn't have been able to prepare, really, enough. Not really make a good preparation for it and we might well have gone in without too much trouble. But at the time that we were going to go in, they had been able to dig a lot of holes. It would have been an Iwo Jima all over again, I suppose.

Farley: Joe, was CB tasked at all to intercept any communications related to the dropping of the atomic bomb? Do you know of any tasking? Were we aware of it? Maybe Abe was. I don't know.

Richard: Well, if so, well then I think it was... it would have been in... Sinkov was

already in the Philippines.

Farley: Yeah.

Richard: And there might well have been something in connection with it, but I don't know that they'd know why. Wouldn't have said why, I guess. I never, as I said, we weren't reading... well, let's say we were reading currently, probably, the stuff to Rabaul. I think we were, down in Brisbane. And if they had sent something to Rabaul from Tokyo like a circular to everybody. But the Japanese, I think, were more likely to conceal that from everybody than to broadcast it like the Americans might, to everyone. I'd be surprised. But I wouldn't be surprised if there had been assignment of coverage to see... to try to find some reaction. But just what... whether there was a link from Tokyo to either one of those two cities that might send messages over it. I think a place to look for a reaction on it would have been civil networks, if there were any left.

Farley: Did things ease down in San Miguel from the time of the arrival of the CB element from Brisbane? Was the word out that this war was going to end in a few months so don't work very hard. We don't have many targets anyway. It seemed to me the attitude was sort of lackadaisical. But you were in Australia yet.

Richard: Yeah, I know... not up there that I can think of. No. I'd be surprise if there was up there either. Because until those bombs dropped and... OLYMPIC was going ahead, with the planning for it. I'm sure that it was... (B% Al), were you up there then?

Farley: Yes.

Richard: Maybe you knew about it. I didn't know. I know I got up there in time to participate in the burning of a lot of documents, emptying a lot of files. But I didn't... well, I had the points and I thought if I got... first home... the first one would get their wives over so I didn't go up to Japan or try to.

Farley: You anticipated that?

Richard: I would be very much... as you say, if they really thought that it was over, I would be surprised because... (B% didn't) have that feeling in Brisbane when I was there. Besides, down there, the Aussies had some... had assignments to take Rabaul. Fortunately, the officer in charge of that felt like his men, that it was not necessary. And then there was people that went to Borneo in August needed support as far as COMINT. As I said, the cut-off area, we could read that Rabaul stuff, I think, right to the end. Yeah, I was sure of it then. I remember once when we picked up that last book... oh, found this book that I said you go back to the square and recover it and saying to the Australians, “Well, that should last you until you get into Rabaul. You should be able to read it all.” But they gave me a queer look. I think they weren't enthusiastic about going into it and I think that was wise too. It was just a matter... there was no reason for attacking and taking the Japanese away from their gardens and making

them mad.

Farley: Yeah.

Richard: What there were some things. I hear in (1g) there or someplace where people took it literally and did attack and get people killed. One area, and I'm not sure just which, I think it was Bougainvillea possibly. And I certainly sympathize with the Australians that were sent into Borneo to get those oil fields and so on. It wasn't necessary. Even if we hadn't dropped the bomb, it still wasn't necessary. We had plenty of oil. There was no use going for that. Going to just get the big places like Singapore, maybe. They had decided to take the Philippines, which was unnecessary. A lot of people died there that they didn't have to. It shouldn't have taken place.

Farley: Joe, you said that, when I asked the question here what happened to traffic, code books, analysts' aids... most of it was destroyed, burned?

Richard: Yeah, everything that we had in the files in San Miguel.

Farley: Did you send anything back to Arlington Hall? Package up, box up anything that should have been saved?

Richard: No, I think perhaps that I had a feeling there were certain files that Central Bureau got and kept because there was a history written right after that. And that seemed to me to have reference to some files and so on. But I think that most of the actual materials we were working with were destroyed. What they might have kept and I'm not sure because that would mean that in all things destroyed were... and I don't know whether all the stuff had even been taken off that ship I was on and gotten to San Miguel to be destroyed. There might have been some of my files on there. These were progress reports, crypt and other progress reports from the various centers, including ours. And the Washington ones were thick. Things were about an inch, or inch and a half thick for each month and took several filing drawers. But certainly, the things we were working with and the traffic we were working on was destroyed. All of Les Truax's traffic was burned up. I think I actually helped on that.

Farley: So some of it was sent back to Australia?

Richard: Well, I didn't do it. But I did have the feeling that they had some reference stuff. Although, again, all I saw was in the library there in 1962. The history that you have here. A copy of it.

Farley: Did the Americans ever do a history of CB? Or was that written by the Aussies?

Richard: The Aussies did it. I don't think we ever did.

Farley: I wonder why didn't?

Richard: I don't know. Gordon (B% Miller)... nobody ever told him to. He would have.

Farley: Gordon didn't know what was going on anyway.

Richard: Well, if it hadn't been for him, maybe we wouldn't have the record.

Farley: All right.

Richard: Yeah, I think that's too bad. Perhaps if we'd written a history and it had been declassified, we'd have had proper credit down there at the archives

Farley: That's right.

Richard: And we haven't.

Farley: Joe, let's talk about a few of the people.

Richard: Yeah.

Farley: Talk about (B% Clarence Yamagata). Was he a pretty top-notch linguist?

Richard: Oh yes. He was, of course, very fluent in Japanese but he wasn't quite so fluent in English. I think he was better off helping English translators like (B% Joe Bell) and those, get the fine things about Japanese than he was working in actual translations into English. It always surprised me a little bit because, I think he'd gone to the University of Southern California and I think he was a lawyer. But Otto was the one that I thought was supreme in both languages because he was so good in English. I would place him above... in usefulness, above Yama in regard to the language because... he was... (xg) recovering code books too. He got clever at doing it. I think the key man that we had in language was Otto Mahrt.

Farley: How about Hugh Erskine? Was he a good linguist?

Richard: Well, I can't tell personally but a couple of the linguists told me that... they said that he wasn't, evidently, a profound linguist that his Japanese came from living there as a child or maybe later, as a missionary's son. I gather that was the feeling that he wasn't a real scholar in Japanese.

Farley: Would you classify Clarence as a nisei?

Richard: No.

Farley: He was full-blooded wasn't he?

Richard: Yeah, I think he was. He was (C% isei) or something. I don't know for sure. Maybe he was. I don't know but I thought he was an actual Japanese. You read Brown's thing about how surprised he was when he came into Corregidor there and there was Yama sitting at a table translating.

Farley: He worked for the Japanese Legation in Manila?

Richard: I don't know. I know that, of course, they told Brown he was working for the G2 and... I don't know. I just thought, perhaps, he was with some commercial company because, as I said, he was knowledgeable at law. And the fact that he was doing... maybe he told me this himself? But anyway, I thought what he was doing was helping American firms. He knew Filipino law evidently too, and Japanese law and U.S. law and so he was able to help commercial firms that wanted to establish branches there

or how to deal with or how to avoid trouble with the Filipinos and perhaps to help Japanese connections and stuff like that. I thought he was helping commercial people, but he also might have had some access to the Japanese that he was using to help G2.

Farley: Joe, did you ever know of any nisei being at Central Bureau or at any of the RI units?

Richard: Not personally, no. I thought that (B% Addis) had some?

Farley: Addis had quite a few. Had an allied translator/interpreter service. But I don't think we had.

Richard: No, not Central Bureau. Of course, I'm not quite sure but what could have... of course, I never saw all the people that were in the intercept outfits, rather they'd starting [sic] by not bringing the nisei in. There might well have... if there had been a Californian, they would have put him in. I think so. At least, I grew up with them and most of them were like the Hawaiians. You know, who formed a unit and fought in Italy.

Farley: In Italy, right.

Richard: I think that it was an unnecessary that we sent those Japanese into prison camps. I think that was more a commercial thing. People coveted their land and thought they'd get it cheaply if they had them sent to the... of course, it cut out a lot of (C% expendables) and supplies for the U.S. because the Japanese weren't working on it and... and the Mexicans there, in some cases, took over their land but they weren't as good. Well, it wasn't their land. They didn't know as much about it. No, I don't think so. I don't know what you'd classify Otto as.

Farley: I don't know either. He was sort of a half-breed to wasn't he?

Richard: He was a German... well, with that name, I thought, well, his father must have been a German. But he must have spoken English from the time he was small. He must have either have gone to an English school or his parents must have spoken English or something. I talked with... ever meet his sister?

Farley: No.

Richard: She used to teach at the University of Minnesota, I think. And she was like him. Oh, a good looking girl. Very much at home in English, as well as, I suppose, Japanese. So, Otto... well, his family was evidently quite cleaver and intellectual and so on. Of course, he had been a tobacco buyer. I don't know how that happened. I'm sure he could have done the same as she had and been an instructor in some university.

Farley: He was sure a good gambler, wasn't he?

Richard: Well he said that... somebody told me that all those tobacco buyers do in the off-season is play poker.

Farley: Oh, is that right?

Richard: Yeah.

Farley: That's where he learned it?

Richard: Well, that's where he perfected it anyway.

Farley: I know he cleaned up a lot of money.

Richard: Yeah. That's what I thought. He had a second income there that exceeded his Army income.

Farley: Joe, do you remember a Captain (C% Fuld)? He replaced Slip Swears as a liaison.

Richard: Yeah.

Farley: Was he a spy for Arlington Hall? What was his job?

Richard: Yeah, he might have been writing a report for Arlington Hall. But of course, on a working level, Sinkov and Kullback were right close. And his wife worked in (1g)... with Mrs. Sinkov working there that I don't think anybody could really have done much trouble between them. Swears was a hostage, as I remember, when he came out. Well, they said they wanted Colonel Sinkov to visit back there... to come back there. As I recall i, Akins said, "Well, we'll send him back if you send somebody important to visit us while he's there." And so they said, "Well we will send the assistant to Kullback." And that was Slip Swears. And so that was why he was there. And why he stayed there when he did. And when Sinkov came back, he went.

Farley: I didn't know that story.

Richard: Well, that's my understanding of it. And I can understand Akins doing that. He just didn't trust him. That's all.

Farley: Yeah, I guess so. Larry Clark? I guess we all know enough about Larry.

Richard: Larry once said to me. He said to me, "You've been bitten by this. You'll always want to keep on discovering... " He had had, of course, as you said, he had been in on the discovery of the Purple... of breaking into the Purple and other things too. So he was lucky he was in on the Japanese one too, with us. And I said, he was the one whose knowledge was the... masterminded the... setting up the - he and Brown, probably - sitting up the communications with our guerillas in the Philippines. He had the code part of it. Of course, they detached some of our people to do that, but he was telling us... disappeared and said that he can't tell you what we're doing or so on. But started to work with us. Of course, I think that was pretty early before he really got going and reading stuff.

Farley: Joe, were you involved, at all, in the TICOM program. Where the troops, and officer... two officers, one an ordinary one and one a linguist, went out to the old Japanese headquarters to try and scoop up some equipments, and ciphers, and code books. Some went to Honshu and some went to Korea and some went... all over.

Richard: I guess if I'd been up there, I would have been sent on one of those. I've read about them and talked with some of the officers. I gather that they didn't... that most of the stuff had been destroyed before they got there. But they did check out to make sure that they didn't have, I guess... kept anything.

Farley: It's seems to me from what I've heard... from what I've read, TICOM effort in the Pacific was unsuccessful because the people were not instructed properly as to what they were to look for. Do you have any thoughts on that at all? They didn't know what to search for.

Richard: Well, any of our people should have known

Farley: That's what I thought.

Richard: Yeah. Certainly these two that went to Okinawa that... like Hart and Friedling... knew what they were looking for. Well, I don't know about these (B% gangs). There might have been some of them that were new. But I thought most of them would either have been experienced at the Hall. There was... possible that they could have... should have had someone like myself or (C% Jacobis) or somebody brief them. Erskine's people, well say, "Well, this is what a code book is going to look like. This is what it will say on the outside." Of course, it will be in Japanese. And give them a few titles like... we knew what they should say. I don't know what the real purpose of... other than to see that they had destroyed them. Of course, even if they got the books, I don't know, the war was over, why we'd use them. Why did we want them? The additive books. I think... I read... of course, Doctor Sinkov went, and some of the people went. to the old folks home there in Japan where they had been compiling the codes and additive books that we... of the main land systems. They were all... the floor was clean. Not a scrap of paper or anything left there. So they had to get some of the people back to tell them what they did and how they did it. They said that when they wanted the coordinates... you know the coordinates on the page, every page was mixed up?

Farley: Yeah.

Richard: They took 10 pencils and just wrote a number on each pencil and just rolled them between their fingers and dropped them on the table and when they... and later, when they picked them up was the other (2g) 10 digits. And then they said for additives, they said they had balls and put them in a basket, shake up the basket and as you took them out, that was the additive book.

Farley: That's about as random as you could get, isn't' it?

Richard: Well, it was pretty good. Good as our Lotto here in Maryland.

Farley: That's right.

Richard: Four-digit numbers on all of them. Of course, on the code books, I don't know how they did that. Yeah, I thought those were very interesting documents that they got. One fellow there wrote about Japanese traffic

analysis that I found very interesting. Oh, there was one thing that we did read, when we were reading all this current stuff. Well, maybe it was later? But anyway, we were reading the stuff from Rabaul and there was a Navy intelligence outfit, RI Company... Japanese Navy Radio Intelligence Company in Rabaul and there was a lieutenant in charge of it. And he was commended. A message came down to Rabaul saying... he was sending his stuff, messages, through the army code for some reason at that time. And a message from headquarters came down commending him for his predictions of air raids on Japan. And they asked him how he did it. And he said... he said how he did it. He said, "Well, in the first place, all these B-29's, when they come over, they'd have a call sign that had four characters in it and all the other airplanes... they had five and other airplanes had four." Well. anyway they had one more than the others. "So, we watched them come over. So we can count how many are there. And as they exercise and get... and fly around Saipan and Guam, we'd follow them on the air, because they naturally send messages now and then. Then when everything... suddenly, for three days, say, there is nothing on the air. We know they are all in the hangers being serviced." And he said, "Then, we'd predict there would be a raid in two days." And the next thing he said, "When they get ready to leave for Japan, they don't send any messages but they tried out their radio. They circled around, pushed their button and sent out a note. Sent out a letter or something." And he said, "We'd watch for that. And when we hear that, we know that they are just flying up for a raid and we sent another warning." I don't know whether there is anything more about that? As I understand it, that was enough to cause the Air Force to send some people out to investigate this, see? But they white-washed it and said that it wasn't really true. But I think they changed all that and tried to make it so it wouldn't be quite as easily apparent. But that was, I guess, read in this 6666 stuff, which was to Rabaul and so on. Army code. Although it was Japanese naval intelligence that was doing it. The Japanese naval intelligence (B% claimed) the Army intelligence was better at TA - traffic analysis - and had worked at it from the start of the war. The Army only got into it sometime after the war had started and had learned from the Navy. And they said they were able to predict such things as the landing on Iwo Jima simply because of the activity on the American networks from Hawaii and messages all the way to Washington, and MacArthur, and things like that. They had to guess, though, that it was Iwo Jima they were at. They couldn't be quite sure. And I think, they usually, like all, gave two or three places it might be. But anyway, he said that that was the extent of their... he thought easy enough to predict big things like that.

Farley: Bouncing back Joe. Was CB ever involved with... our RI units ever involved in the intercept of the itinerary of Yamamoto? Or is that all Navy?

Richard: Well, I find that a little hard to say. I think it was mostly Navy, but I remember a conversation about that, that I overheard at the time, there were some people there discussing it. I know that the books say that that

was read in the main Navy code but this discussion was, my impression of it was that it was read as it was relayed in some lower echelon code. And just what that was, whether it was naval air-ground or some lower Navy code that was read was readable. And I think though, that was the conclusion of the Japanese man that I read once that was writing about that. And he said that he thought, he was worried that, in the first place, anything that was sent over the radio about Yamamoto's itinerary and he said that... his conclusion was that it was relayed by some lower echelon. It wasn't secure.

Farley: I seem to remember it in the air-ground liaison code... or the air-ground code.

Richard: Yeah. It might have been. Of course, when was that? 43?

Farley: Early '44.

Richard: Yeah, was it? The only way if it was then, it could well have been... might have been in both places.

Farley: It could. Yes.

Richard: It was an important thing and the Japanese might well have seen that it (B% couldn't read it in the big code) when it might have been readable.

Farley: Well, the Navy has claimed credit for it.

Richard: Well, I think it would have been... well yeah. Oh... I don't know whether our people... I don't know whether our people were reading it on that or not. You'd have to ask Captain May. He might know.

Farley: Joe, we have just a little bit of tape. Do you want to go for another half cassette? Or do you want to quit or what do you want?

Richard: Well, if you have all your questions that might possibly go ahead. We'll try it.

Farley: Okay. We'll let this one run out and then I'll have to go another cassette then.

Richard: Oh, you do?

Farley: I have another one in the other room. But what I want to ask later on, as soon as we get the other one, what do you rate the prime accomplishment of your military career in World War II? And then any other incidents that you would like to recall. Why I don't just... well, it's blinking now. Let me cut it off.

Richard: You want to ask that question?

Farley: Okay, Joe. Sort of putting you on the spot but, during your military career, this is World War II, what do you class as the prime accomplishment or the most significant achievement of which you are most proud?

Richard: That's easy, of course. That's being in on the solving... or breaking into of the Japanese Army codes... systems. Like 2468, Japanese transport.

That was easily the biggest thing. The next, because of course before that you didn't read a thing. We didn't know how to do it and was entirely new. Was a new field, unplowed. Hadn't been any Japanese Army stuff read since 1939.

Farley: Yeah.

Richard: The next thing was, I guess, that devising the way to recover that additive book that had been enciphered through a square. That was a unique mathematical solution and that was... I did do some things that were satisfactory to me. Did a map of all the Pacific there, showing the areas in which each code was used. For instance, the main Army code, 7890, was used in certain areas and then we had our area where the 6666 was used and then there were subsidiary codes from Rabaul down to armies... I mean divisions that were 5555 and 7777. And there were also some 5555 and 7777 up in Alaska. Anyway, we drew this chart up based on our best knowledge we had from reading these code messages for where they were used and what echelon and so on. And we did that and put it in the monthly report, when I came back to Washington to visit on that TDY, I found an officer that was there. He was using it with it... he had it under the glass on his desk. He said that this is very... I said, "I'm glad to see that you are using that." And he said, "Yeah. It's a big help." I think he was... I don't know whether he was an intelligence officer. He was certainly probably a TA officer. But I didn't really know what his duties were. That is, of course, we... well, anyway, Washington put out such a thing. And as I said, I thought that our code supplement for the monthly progress report was much more readable and useful than even than what Washington put out. But of course, all the big discoveries (2g) went by electrical and were acted on before they got into such a report. For background and for reference, in case you got a reference to a code document. This square's encipherment they used... I didn't... of course later on, when Maryland got into new arithmetic in the school, I knew what they were doing. They were using non-based (B% ten) arithmetic, see. It was all mixed up. It was a good device, to use a square to encipher their... that had random sequences in it. They didn't know the dangers that were... weaknesses of it and had they known them, they might well have avoided them. But this was defeated. The standard way of reading messages, which is to overlap them and subtract them. But at that square, you couldn't subtract anything and compare. Even though you had the messages written out, overlapped properly, without the square by which that additive had been applied, you couldn't difference them. You couldn't recover the code groups. And that's what the Japanese... also, of course when they changed these squares every now and then, it meant you couldn't take all the messages sent in one additive book and run it against each other for hits.

Farley: Yeah.

Richard: Of course, the one thing about the Japanese were, they were very careful

to subdivide their messages so the beginning was never at the beginning of the message that was sent. That gave them a lot of security to start with. And then the fact they limited all messages to 50 groups or less, so that you had to read... you had to have all the additive pages in a book available so that if you got a 10-part message, you'd need 10 pages. You couldn't just use two or three pages. So that divided up and gave them security on parts of messages where you could read some parts right away and the other parts we couldn't read for a couple of weeks, perhaps. Until you recovered the other pages. Those were the three things, of course... you said military career. You meant when I was in the Army?

Farley: Yes.

Richard: There were two things I did when I was in Europe with Erskine that were useful. Bu that was as a civilian.

Farley: Put it on if you like.

Richard: Yeah? Well, the two things I did there... when I first arrived there, they were reading the Czech border flight. They just lost continuity on it because the Czechs had gone to using that square, of all things - similar to the Japanese square - to encipher their starting points. And it wasn't a very difficult one to get out. So that was very easy. The first day I got there, I got out the square they needed for the time being. And as soon as they saw it, why the boys got out their own after that. But that was the first one I did over there. And the next thing was to identify the Polish... there were certain networks that were intercepted at Arlington Hall and the people there said that this is a Polish military network - Army, Navy, Air Force. But they didn't dare publish anything on it. They hadn't managed to identify it clearly enough for what they thought. To say this is the army network and they sent this many messages. Actually, they didn't send very many messages, just practices. So I worked on identifying that. The way I started out was... I guess at some of the intercept stations... the thing was the main net went to five stations, or something. If you look in the almanac... or something. Reader's Almanac? Something that said, well, pulling those four military districts... or, I guess it was six stations on this thing, this outstation, pulling the four military districts. Well, where are the others? What are the others? You couldn't just say those four were the... that was the military... and then there was obviously out of Warsaw. Looked like the main military) network. There was also a navy network out of Warsaw and I think an air force network. I know there was a navy one. I remember going down to an intercept operator at (1g) that had intercepted both networks. Someway they were assigned that too. And I said to him once, “How about this guy?” It's the head of the navy network on the coast there. “Is he also an outstation or is he just an outstation on the main net?” He said, “Oh, yes he is. I never thought of that.” And he said, “He's got the same (B% first). He's the same man.” And so he went to... and then they actually started looking for it and the TA man at the station found that there was a practice message - Navy was a little

different practice than the Army. And one time they sent a Navy practice up from that guy to the... on the main net. And I think the other one was actually Air Force. I've forgotten now exactly. Anyway, the four military ones there. That was enough to identify the network. It was an army network. The next thing was to get the outstations. Well, I knew where the outstations should be but the DF was crazy. Somehow, whenever they went over Poland they went way into Russia. Too far to the other side of Poland. You couldn't have anybody this side of Warsaw count their DF. It wasn't so because two of them were. I don't know. We finally got either something... it was sometimes when they had maneuvers, they actually would send some messages. And I guess I finally got some DF from... up near Bremerhaven and it carried DF from there that would put them in near the right places. So we finally got them going. The Polish stuff was interesting. I didn't do much on this except help a little bit, I guess. There was one polish intercept station that was near the corner of Poland that used to intercept our maneuvers there. Or the united maneuvers. And we were able to read enough messages there to show that they were intercepting USA and (B% ASA home) network and their units were (B% decent), enough to persuade the top people there to change their call signs when they (2g). (TR NOTE: Mr. Richard is garbled because of a coughing fit). Security, really. They just said, "Well, if we change anything we won't be able to operate." Well anyway, they did. Finally. But then the third thing I did was... they were reading... at that time they had this tunnel in Berlin and they were getting a lot of stuff sent in East Germany. And one of (C% Ziest)... one of the study at the... Captain Ziest was in charge of it there at ASA, he wanted a study of the trains. The train numbers. So they IBMed them for me and I did a study of the train numbers, trying to identify which ones belonged to the Russian army and which numbers... trains didn't and so on. And I think that, I've forgotten now exactly how. I think it came out systematic like most German stuff so it came out all right. Those were the... of course, we did a lot of other things.

Farley: Yeah, sure. What did you get your Legion of Merit for?

Richard: That was for the 2468 recovery. Of course, Otto got his for breaking the book and Erskine got his for being in charge of language, I guess. And Clark, he was with me on the breaking of it. And of course, Doctor Sinkov was in charge.

Farley: (C% Zack)?

Richard: Zack was a big help on all the stuff after that. Once we had it, he would come out and work on it... overlap. Go back and see how he could... what kind of (B% idea) runs he could make to do the same thing or to help the... he was always devising some new run to make it easier for the translators or for the decoders or for the strippers. And as I said, he would come down and sit with the stripper or the translator or whoever and actually see... do what they were doing. And then he'd go back and devise some

way of doing it by IBM. Yeah, he had the... I know a lot of the reports we sent to Washington with types of runs and types of things he had done with the IBM and they were being described for them in case they wanted to use them. So, oh, he was invaluable. Yeah.

Farley: Did any enlisted man ever get awards?

Richard: I was an enlisted man!

Farley: I thought you were warrant. You were a warrant then.

Richard: Not, well, that's why I got the warrant.

Farley: Oh, is that it?

Richard: Yeah. Oh yeah. I was a sergeant when I did it.

Farley: Okay. Tech sergeant? Master?

Richard: T-4.

Farley: T-4? Oh yeah. Oh, I thought you were a warrant when you received...

Richard: Well, I was a warrant when I received it but that was because they didn't give them out till some months later. Doctor Sinkov, well, he looked around to see what (B% agents) were available. He said, "well, warrant officer makes more than a lieutenant. So, would you like to be a warrant?" I said, "of course." And I (1g) to W-2, the higher one, making it up to captain's pay. That was lot better than I could do by going to OCS and coming back. And I was more interested in money than rank in those days. Of course, if I had thought... had known... well, if I'd thought about reserves or something, I might have changed over to, or tried to change to lieutenant or something if they had a... because they did give direct commissions to some people like Joe (B% Allen), I think.

Farley: Yes.

Richard: And so of those who were most useful. And that was the reason. I was a T-4. Well, a TA... the headquarters TA was constantly being enlarged and so on. There was that opening on it.

Farley: Joe, I forgot to mention this. Colonel Harold Dowd. Do you remember him?

Richard: He was in charge after (C% Scherer) of CB.

Farley: All right.

Richard: And then he was moved over. I guess they wanted to give Sinkov the position. In addition, they needed somebody to head (C% Addis). So they moved him to Addis, which was a big thing, came to be a big thing, I guess. So that they had tons of documents to handle. So, that's what happened when he left us. I don't know exactly when. But he was replaced for sure. He was there fairly early.

Farley: I remember him there in the spring of '44. Could that be?

Richard: In CB?

Farley: Spring of '44.

Richard: You think he was in charge of CB then? He might have been at Addis and just visiting or something. Well, I don't know.

Farley: I vaguely remember him being there, probably in March or April of '44. That's when the 12 officers and 80 enlisted folks came over.

Richard: Do you think you reported to him?

Farley: I believe so.

Richard: Oh, well, then he was still in there. But I'd forgotten when he moved away.

Farley: I think Abe was his deputy or Abe was sitting beside him and Larry Clark was the exec.

Richard: Yeah, he was the next one.

Farley: It doesn't matter.

Richard: (B% Turner) was over there. It was '44 then. It was after we were expanding like anything, but I think that Sinkov was... he was the one that went down and grabbed the WAC's that we had and so on at Sydney. And so I was thinking that by the time the WAC's came we must have been giving the full...

Farley: We were on the ships with the WAC's.

Richard: Oh were you?

Farley: They landed at Sydney and we were on the west (1g) or whatever it was.

Richard: That was unusual... a different trip if you had the whole... how many? A couple of hundred?

Farley: There were at least 200. I'd say there were probably 500.

Richard: Were they all sleeping in the hold too?

Farley: Yeah, all over the ship. There were 200 that ended up with CB and I don't know where the others went.

Richard: Oh, was it that many? I know it was quite a few girls.

Farley: Two hundred I heard.

Richard: Wow.

Farley: It was a bid deal, Joe. They landed, the WAC's came down the gangplank first with all the newsreels grinding. They carried their guns and their gas masks and barracks bags. And after they shut off the newsreel cameras, then the GI's were called up to haul all the barracks bags and everything down so that the WAC's wouldn't have to worry about it.

Richard: Yeah.

Farley: I always said that when the WAC's made Australia safe, we landed!

Richard: You were after them?

Farley: Yeah, we we came after them.

Richard: I know it was a big thing, the WAC's.

Farley: Were the WAC's a welcome assist? Were most of those girls pretty competent? Talented?

Richard: I think so. Some of them were very much so. Well, it varied of course. From everything from Dorothy (C% Pigg) who was in the... I don't know how well she might have done in cryptanalysis, but they had like (B% Snyder) and all those... and the girl that married? Oh, what was his name? He's dead now. I met this... seen him at the reunions.

Farley: Not (2g)?

Richard: No, this girl that married Snyder? Was it Snyder? Yeah, I think so.

Farley: Barney Snyder?

Richard: Yeah. She's a librarian, I think. And the two of them live in Kentucky now. I always a very nice... she was a very intelligent-looking girl. I didn't have any of them working for me, so I can't say for certain, but I would think that they were probably... I don't know whether Sinkov looked over the records and took all the college girls or not but he should have. Because they would probably be more likely to be competent in this... able to work at this stuff. Must have gotten as many as he could.

Farley: Joe, do you have anything else you want to put on the record?

Richard: I thought they were a big help, yeah.

Farley: Anything else we should put on the record? If we've overlooked or I've just skimmed?

Richard: Well, I think I've said that we good liaison with, contrary to what they write, we had good liaison, I thought, with the Navy. We borrowed their translators. We had a Navy man that was in the outfit for years. With their permission, read the Navy code that was most important to us, which was the naval air-ground because it was the Navy planes used to bomb the Army. So that there were anything saying that there was poor liaison with the Navy was wrong. It might have been better had the Navy actually been subordinate to the headquarters or collocated or something like that. But certainly, there was no animosity that I know of. And they say that Akin wouldn't let the Navy people there, why certainly, if they had any business, they would have been welcome to come. Those translators were very competent, good ones. They didn't send us the worse ones. And I think (B% Nate) was a good crypt man. He didn't... he organized the naval air-ground effort very well. I don't know what the Navy, why they didn't do it themselves, too, in Hawaii or something. I think that they did actually set up something in Guam that utilized that later. There was something that they had there.

Farley: Late '44?

Richard: Yeah. But nothing I've seen that really mentions all low-level support that we gave the troops reading those two air-ground codes.

Farley: Okay, The Aussies, for a long time, wouldn't admit that they worked with the Americans in intercepting COMINT. Did they change their attitude?

Richard: Must have been something political.

Farley: I think it was.

Richard: They wanted to keep there own unit, if not secret, restricted.

Farley: Okay.

Richard: Even when I was there that was the one drawback to the duty there was that you had to try to disguise it or cover it in some way.

Farley: Okay.

Richard: That was purely a thing like the way we were before. (B% Peterson), when we tried to be... and the newspapers didn't always say "the NSA, the super secret agency." We hadn't been advertised in the paper. We were overlooked and not... the reporters hadn't got on to us. They didn't have us in their morgues and in their files so that they could... anything that came up they could refer to and know all about, know a lot about NSA. They wanted... it was simply... that was simply a thing that they, I think, they hoped that there... because NSA had all this publicity. See, if they said they worked with NSA, people would say that you are still working with them. And they would like to keep that out of the newspapers.

Farley: Joe, I've about exhausted all the questions that I have. Do you have any further comments? It's three thirty. Do you want to knock it off?

Richard: I suppose that would be best.

Farley: What classification shall we put on these four tapes, Joe?

Richard: I'm afraid I couldn't...

Farley: At least SECRET, COMINT Channels? Should it be higher than that?

Richard: The one part that is, that I don't know the classification of. It hasn't been in print, you might say, is I've mentioned the use of squares. And that is... I don't know the classification of that.

Farley: That's still a technique.

Richard: A technique, yes.

Farley: I'd say at least...

Richard: I guess the one thing you still want to do is to discourage the use of such things, although, as I said, I found out that... I think the Russians must know it because the Czechs were using it on their border guards.

Farley: Yeah.

Richard: They weren't enciphering the whole message with it. I don't think they were. They might have been. Maybe they were doing the whole

message? I've forgotten now. But they were... certainly the indicators. Maybe they were doing the whole message. I've forgotten. I know that it came out easy, getting it. What they had there was simple to get it out. Why, I don't know. Now I've forgotten. But there was a part of the... Steve hadn't written about it, as far as I know. I was surprised when you said he had worked in...

Farley: CB?

Richard: CB. I never saw anything he wrote on the subject. So I thought he might well have. Maybe he didn't get to that. He wrote the book on codes and additives... codes enciphered by additives. I thought that was going to be book four or something.

Farley: Maybe so.

Richard: Whether he ever wrote that, I don't know. Certainly there is a lot. There should be a book written on it as long as it was classified. There are a lot of pitfalls in using that, yet a lot of appeal and advantages in using the non-normal arithmetic.

Farley: Yeah. I don't know whether he ever wrote anything on that or not. He briefed a reserve officer group on his duties in CBI.

Richard: Oh yes.

Farley: So I know he as there.

Richard: Where was Steve?

Farley: He was a cryppie but I don't know on what. I don't know what system.

Richard: He didn't say what?

Farley: He didn't say what or if he did, I've forgotten. Joe, I hate to rush you off. I want to thank you again for coming out and putting... I think this is a far better interview than you did before. I read that one you did with (B% Goodman) and he didn't get very much information out of you.

Richard: Well, of course, I've read all these books that they have put out on it and just how it... the break took place and exactly got it through. And the way I've said it, I'm sure, is as close to being accurate as anyone can give you. It was a parallel operation. It was done by CB and by Washington. And CB would have done it, a complete thing, whether Washington came in on it or not. And Washington would have been delayed in getting it if we hadn't set them on the right track when they were off the track. And I think we owed them, the (C% WEC), Washington, perhaps, in that like a scout or like somebody had chosen a (B% batter) in basketball? That's about what they did with him. That was the point I would like to make sure it gets someplace. That it was a parallel operation.

Farley: Set the record straight. Joe, thank you again. Appreciate it.

[End of Interview OH-1985-14-RICHARD]